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Project management offices as a value creation mechanism in Nordic leveraged buyout investments

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ABSTRACT OF
MASTER THESIS

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Private equity investors, that is professional investors operating within a private equity company, manage a portfolio of companies and apply a series of mechanism to their portfolio companies aiming to create superior value. One method of applying these mechanisms is to establish a project management office (PMO) in the portfolio company. The PMO manages a portfolio of projects focusing on prioritizing, resourcing, creating a project management system and, above all contributing to better strategy execution.

This master thesis focuses on examining the circumstances under which the PE investors have established PMOs in their portfolio companies and how the PMOs in turn have contributed to value creation. Special interest is paid to the situational configurations of different PMO frameworks and roles in different stages of private equity investment lifecycle. This study builds on previous research on private equity investors' value creation mechanisms (Järvenpää, 2014) and on strategic PMOs (Crawford, 2011).

This thesis was conducted as a qualitative research and it was based on four case companies and six value creation programs run within these companies. The case companies were selected based on their fit to the defined scope so that they formed a representative set of different PMO configurations. All the case companies have received funding within the last ten years. In addition, they had recently run a PMO or were currently running one. In general, a C-level executive and an investment case manager per case were interviewed by a semi-structured theme interview. In addition, written PMO material from case companies was analysed.

The data analysis provided a set of generalizable statements, structures and frameworks as well as direct quotes that were used in the findings. The method of analysis, systematic combining, ensured anonymity of the respondents and generalizability of results. The findings were then discussed to develop a framework for using PMO as a value creation mechanism. The framework encompasses propositions of underlying situational and organizational factors the PE investors should take into account when establishing a PMO to benefit from it.

Keywords:	**Language:**
Private equity, project management offices project management, value creation	English

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Pääomasijoittajat, eli pääomasijoitusyhtiössä toimivat ammattisijoittajat, hallitsevat yhtiön yrityssalkkua ja soveltavat erilaisia arvonluontimekanismeja kohdeyrityksissään. Yksi keino näiden arvonluontimekanismien soveltamiseen ja implementointiin on luoda projektitoimisto (PMO) portfolioyritykseen. PMO hallinnoi strategisia hankkeita keskittyen priorisointiin, resursointiin, projektinhallintajärjestelmän luomiseen sekä ennen kaikkea strategian toteuttamiseen hankkeiden kautta.

Tämä opinnäytetyö keskittyy tutkimaan olosuhteita, joissa pääomasijoittajat ovat perustaneet projektitoimiston salkkuyrityksissään ja miten PMO:t puolestaan ovat vaikuttaneet lisäarvonluontiin. Erityishuomiota kiinnitetään erilaisiin PMO-malleihin ja -rooleihin suhteessa portfolioyrityksen pääomasijoituksen elinkaaren eri vaiheisiin. Tämä tutkimus pohjaa aiempaan tutkimukseen pääomasijoittajien arvonluontimekanismeista (Järvenpää, 2014) ja strategisista projektitoimistoista (Crawford, 2011).

Tämä diplomityö tehtiin teemahaastatteluin laadullisena tutkimuksena. Tutkimusaineisto kerättiin tapaustutkimuksena neljässä yrityksessä toimineista kuudesta arvonluontiohjelmasta. Tapausyritykset valittiin niin, että ne muodostivat edustavan joukon erilaisia PMO-malleja eri pääomasijoituksen vaiheissa. Kaikki yritykset ovat saaneet rahoitusta viimeisten kymmenen vuoden aikana. Lisäksi yrityksissä on äskettäin ollut tai on nykyään käynnissä projektitoimistovetoinen arvonluontiohjelma. Opinnäytetyössä haastateltiin tapausyritysten ylimmän johdon edustajaa ja tapausyrityksen investointipäällikköä puolistrukturoidulla teemahaastattelulla. Lisäksi analysoitiin tapausyritysten kirjallista projektitoimistomateriaalia.

Tutkimusaineiston analysoinnin perusteella laadittiin joukko rakenteita ja malleja, joita käytettiin viitekehyksen luomiseen. Näin varmistettiin myös vastaajien anonymiteetti ja tulosten yleistettävyys. Analyysin pohjalta kehitettiin viitekehys projekti-toimiston käyttämiseksi arvonluomismekanismina pääomasijoittajan portfolioyrityksessä. Malli pitää sisällään ehdotuksia ulkoisista ja sisäisistä tekijöistä, jotka pääomasijoittajien olisi otettava huomioon projektitoimistoa perustettaessa hyötyjen maksimoimiseksi.

Avainsanat:	**Kieli:**
Pääomasijoitus, projektitoimistot, projektin hallinta, arvonluonti	Englanti

Alkusanat

Sampanjaa!

Viimeisen vuoden aikana ovat monet asiat liikkuneet suuntaan, jonne en missään nimessä suunnitellut niiden liikkuvan vielä pari vuotta sitten New Yorkista palattuani. Tähän mennessä oli tarkoitus olla jo valloittamassa Pariisin katuja! Vaikka vielä en ole Pariisiin saakka päässytkään, ovat nämä viimeiset viisi ja puoli vuotta yliopistolla olleet unohtumattomimmat ikinä!

Tätä diplomityötä olen kirjoittanut aktiivisesti kuukauden, vähemmän aktiivisesti kahdeksan. Sitä on kirjoitettu lentokoneessa Atlantin yllä, Nizzan auringon alla, Aarhusin trendikkäimmissä kahviloissa, mutta suurin työ on tehty tukevasti klassisella Artekin 69-tuolilla - kuten niin monet teekkarit ennen minua!

Tämä projekti ei kuitenkaan olisi tullut päätökseen ilman muutamien ratkaisevien henkilöiden apua. Ensiksi haluan kiittää ohjaajaani ja valvojaani Markku Maulaa, jonka rauhallisuus ja uskomaton tietämys aiheesta ohjasivat minua oikeaan suuntaan näiden kuukausien aikana. Toinen suuri kiitos kuuluu työnantajalleni Kämp Collection Hotelsille, joka mahdollisti eteläisen dippaloman ja toisaalta antoi sysäyksen koko tälle työlle. Kiitos kuuluu myös Tomi Alénille, joka avasi minulle ovet case-yrityksiin ja siten koko tämän työn toteutumiseen.

Sydämelliset kiitokset kuuluvat ennen kaikkia Äidille ja Isälle, jotka olette antaneet minun kulkea itse valitsemiani reittejä, mutta sysänneet minut tarpeen tulleen oikeaan suuntaan kurssin ollessa kadoksissa. Silti isoin kiitos kuluu kaikkein rakkaimmalle hassuttelijalle, Ainolle, jonka maanläheinen asenne on pitänyt tämänkin haihattelijan jalat maassa.

Opiskeluvuodet ovat olleet välillä vauhdikkaampia, harvemmin rauhallisia. Kiitokset kuuluvat myös opiskelukavereilleni, joiden kanssa olen ryönännyt niin Otaniemessä, Itäisessä Satamakaupungissa kuin Suomenlahden toissa puolen. Kiitos Athene ja Informaatioverkostot siitä, että olen saanut olla juuri niin vähän – ja paljon - teekkari kuin olen halunnut. Tupsulakin painan silti Wappuna päähän ylpeänä!

Erään viisaan henkilön sanoin virtava vesi säilyttää raikkautensa, etsivä mielensä valppauden.

Helgingissä, 25.11.2017,

Saara Sulonen

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1 INTRODUCTION

1.1 Background

Today, private equity investors operating within private equity house apply value creation mechanisms that often differ from traditional value creation methods such as financial engineering and cost cutting. Private equity investors focus now on operational development of their portfolio companies and creating strategic distinctiveness. In contrast to other forms of investments, such as venture capital, established private equity houses traditionally invest in already stabilized companies in low-growth but cash-rich industries (Jensen, 1989). Recently PE investors have also explored industries with different industry and market dynamics.

Private equity emerged as an alternative form of ownership already in the 1980s. As a result, the amount of literature discussing different value adding mechanism is comprehensive. Several studies have found positive relationship between buyout investment and firm performance (see e.g. Jensen, 1989; Kaplan and Strömberg, 2009; Valkama *et al.*, 2013). Moreover, project management is a well-studied research field, and thus research on project management and project management offices (PMO) is extensive. Regarding the impact of project and program management offices on firm performance, several studies have shown that PMO contributes to improved project management and consequently to improved strategy execution (see e.g Crawford, 2011). Consequently, more and more companies turn to PMOs to secure execution of strategically meaningful projects and programs. Although both research streams are strong as such, their intersection has received little attention. This study builds on earlier research on both private equity industry and PMOs, and by combining interview data with other data sources constructs insights and best practices of the use of PMO in private equity investments.

Even though several studies have clearly demonstrated the positive impact of private equity investors in their portfolio companies and explored a series of value adding mechanisms, it is not fully understood how private equity investors can exploit these mechanisms at the very operational level in their portfolio companies. It is presented that PMO can act as transformational device, it ensures better use of resources within a program or in a multi-project environment and contributes to e.g. better monitoring, and improved efficiency. Private equity investors have also discovered the value of PMOs and systematically establish PMOs in their portfolio companies. However, it is still rather unclear under which circumstances and how private equity investors can and should use a PMO to create value.

Besides building on prior studies on private equity investors' value adding mechanisms and use of PMO, the aim of this study is to provide private equity investors and case teams improved and deeper understanding of the use of PMO in the context of private equity and especially buyout investments. The study aims to provide practitioners tools to evaluate when a PMO can contribute to value adding activities, as well as insights and best practices of the use of PMO.

1.2 Research objectives and questions

Earlier studies have shown that private equity investors have succeeded in creating additional value in their portfolio companies which have often outperformed their peers (Acharya *et al.*, 2013; Bruining, Verwaal and Wright, 2013). However, it is not fully understood how private equity investors exercise their power at the operational level in their portfolio companies through PMOs and thus contribute to value creating and adding activities. Hence, the aim of this study is to explore the circumstances where PMO can be used to create value and mechanisms through which PMO can contribute to value adding activities in buyout investments. The research question is as follows:

How and under what circumstances can private equity investors create value in their portfolio companies using a PMO?

In order to answer the question, one must understand the underlying value adding mechanisms of private equity and how and under what circumstances these mechanisms are used. On one hand, it is crucial to understand why private equity involvement have affected positively the firm performance, and on the other what has resulted in negative returns or can be considered a failure. In addition, one must understand the mechanisms and typical processes of a PMO: how and under what circumstances companies establish and use PMOs and consequently, how they operate within an organization. Earlier studies have discussed the use of a PMO in context of large, often publicly listed companies. Although these findings are related to firm-level performance and the value created by PMO, it is reasonable to examine PMOs specifically in the context of private equity portfolio companies and what is the additional value provided by the PMO since private equity investor ownership alters the operating environment and objectives e.g. in terms of leverage and dept. Special attention is paid to how PMOs can contribute to transforming companies and managing strategic initiatives. In conclusion, the main question can be divided into two sub-questions:

1. *How do private equity investors seek to create value in their portfolio companies?*

2. *How can a PMO contribute to value creation in context of a leveraged buyout company?*

In order to answer these questions, this study has three primary objectives:

1) To review existing academic literature on value adding mechanisms of private equity investors and on use of and value created by the PMO
2) By studying the sample of case companies, to explore how and under what circumstances private equity investors have used PMO to create value in their portfolio companies
3) To generate a synthesis that explains when and how private equity investors should use a PMO to create value in the portfolio companies

The purpose of the first objective is to provide relevant theoretical data that can be utilized in the analysis of case companies and on the other hand, in the theory building phase. The first objective is essential in constructing an initial theoretical framework and in achieving the two latter ones. The second objective is crucial in elaborating a synthesis of PMOs' contribution to value creation in private equity investment portfolio companies.

1.3 Research design, methods and scope

This thesis is conducted as a multiple case study. The research process consists of five distinct phases as illustrated in the ***Figure 1***. First, initial theoretical framework is build based on existing academic literature. Findings from the first phase then guide the interview process and the study in general.

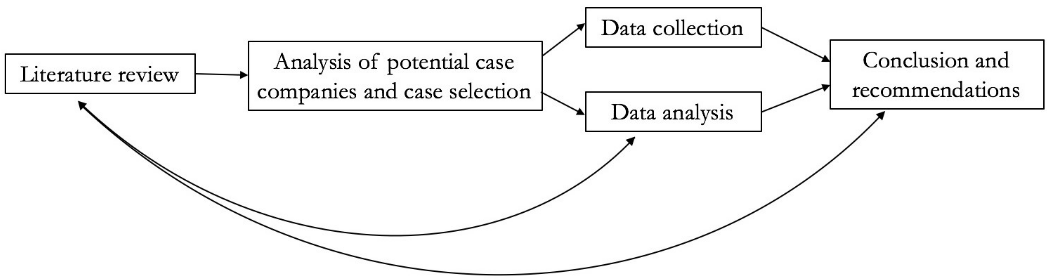


Figure 1: Research process

In the second phase, cases are selected based on relevant conceptual categories. That is, they are chosen so that the selection follows theoretical, rather than random sampling (Eisenhardt, 1989). Previous academic literature has examined private equity investors' value creation process in different phases of the investment. Also, the value adding mechanisms of project management offices are widely discussed in earlier academic studies. Thus, it is justified to choose cases from different industries and in different phases of private equity ownership in order to explore the factors affecting the value creation mechanisms of PMO in private equity portfolio companies. Furthermore, cases are selected so that they include both exceptionally well-structured project management offices as well as companies with less structured or no established PMO at all. By examining various types of PMOs, the study will reveal not only how successful PMOs create value but also how they differ from their peers and in which terms.

The next phases, data collection and data analysis are conducted concurrently. By doing so, it is ensured that initial findings are also considered in data collection phase

(Eisenhardt, 1989). The last phase consists of developing a relevant and meaningful theoretical framework which summarizes the findings of previous phases. The ***Figure 1*** illustrated how analyzed data is simultaneously compared with the findings of the literature review. Thus, the research process is iterative.

In view of the research problem, program management offices in companies that have received private equity funding are the most natural unit of analysis for this study. In addition, the time frame of potential cases was limited to companies that had received funding during 2007-2016 to ensure the topicality of the results.

In the data collection phase, the main data sources include interviews with investment case representatives and managers of the case companies. This data is then supported by and combined with additional data sources consisting of analyses and reports from PMO initiation phase and PMO reports. These primary data sources are supported by secondary data sources such as information on prior work experience of PMO leads from LinkedIn and complementary event data from board reports.

1.4 Definitions of key terms

Private equity

According to EVCA (2007), private equity is *"the provision of equity capital by financial investors – over the medium or long term – to non-quoted companies with high growth potential"*. Private equity falls under the umbrella of "alternative investments" together with stock and bond portfolios, and can be considered as the main category for all equity capital investments in non-stock listed companies.

Buyout

A buyout is a private equity investment in which the PE investors purchases company shares thus acquiring controlling interest of the targeted firm. Investment is often completed together with the existing management team. A management buyout (MBO) is completed by the management team of the company in question. A leveraged buyout

(LBO) is accomplished when debt accounts for a substantial share of the total investment. In an LBO, the returns generated are expected to be greater than the interest paid on the debt and thus, investors risk only a small amount of capital while realizing high returns (EVCA, 2007).

PE investor and PE company

The focus of this thesis is in the value-adding activities of private equity investors in their portfolio companies. Focus is two-fold: on one hand, the purpose is to outline private equity companies and investors' value creation mechanisms and, on the other, explore and understand the role of PMOs in firm-level value creation. Hence it is important to distinguish PE investor and PE company from portfolio company. PE company refers to companies that manage private equity funds whereas PE investors are investment professionals who work in PE companies. In other words, PE investors operate within a PE company. PE investors are also referred as investment partners, investment managers or investment professionals. PE companies are established parties in comparison to individual investment professionals or a group of investment professionals. This thesis focuses strictly on PE companies and PE investors as defined above. (

Portfolio company

This thesis focuses on value-adding activities accomplished in a PE investment portfolio company, also called a target company or case company. Portfolio company has received funding or is currently funded by a private equity company. The PE investor and the PE company exercise their power gained through majority ownership over the portfolio company.

Project or Program Management Office (PMO)

Project or program management offices (PMO) vary widely: *"Some serve as a means to standardize project-related governance processes and facilitate sharing of resources and tools"* (Project Management Institute, 2017) and others act as a strategy implementation vehicle. PMO is home of project management system and center for developing project management expertise. It manages a distinct program and project portfolio and has operational as well as financial responsibility over projects. A PMO may at simplest be center of excellence, but it can also hold a strategically important role in the organization. In this study, most PMOs carry a strategically meaningful role in ensuring strategy execution through variety of projects or enabling strategic change in the target company. A strategic PMO aligns project and program work with corporate strategy across an enterprise and thus, often acts as a transformational device (Crawford, 2011).

Even though project management office is by far the most used term, it is recommended to name PMO as program management office or enterprise project management office to accentuate its enterprise-wide, strategic role. Adequate name emphasizes the corporate objectives PMO pursues.

1.5 Structure of the thesis

This study is organized as follows: In Chapter 2, I summarize the key findings of earlier research and academic literature both on the value creation mechanisms of private equity and on the use of PMO. Chapter 3 presents research methodology in more detail and main data sources. In Chapter 4, I present results of the study whereas in Chapter 5 I discuss the implications of the results. Last, Chapter 5 also assesses the validity and reliability of this study and suggests directions for future research.

2 LITERATURE REVIEW

2.1 Private equity value creation mechanisms

There are number of mechanisms that can either increase or decrease company value. Value generation can be intrinsic or extrinsic. Industry or market-level changes derive extrinsic value creation and thus it is not directly linked to company performance. Intrinsic value creation stems from firm-level improvements e.g. in operational efficiency, new strategic direction or better margin management (Berg and Gottschalg, 2004). Traditionally, value is created in buyouts through high leverage and powerful incentives which drive buyout companies to improve operational performance and force them to distribute cash in the form of high debt payments (Jensen, 1989; Valkama *et al.*, 2013)). However, White and Zeisberger (2016) critique that it is hard to quantify the impact of individual drivers on enterprise value creation and consequently, on investment returns.

There are three phases in a buyout: acquisition, holding period and divestment as depicted in ***Figure 2*** (EVCA, 2007; Bain & Company, 2017)**.** Most of economic value generation is completed at the two last phases, that is, during the holding period and at exit. Value creation during holding period is strongly linked to financial performance: improvements in operational performance, reduced cost of capital and for instance better cash flow management contribute to financial performance in terms of increased revenues and margins, and therefore, to value creation. Economic value is captured at exit. However, value captured is not necessarily linked only to performance improvements but to valuation multiple: rising market or industry valuation also generates larger returns (see e.g. Berg and Gottschalg, 2004; Guo, Hotchkiss and Song, 2011).

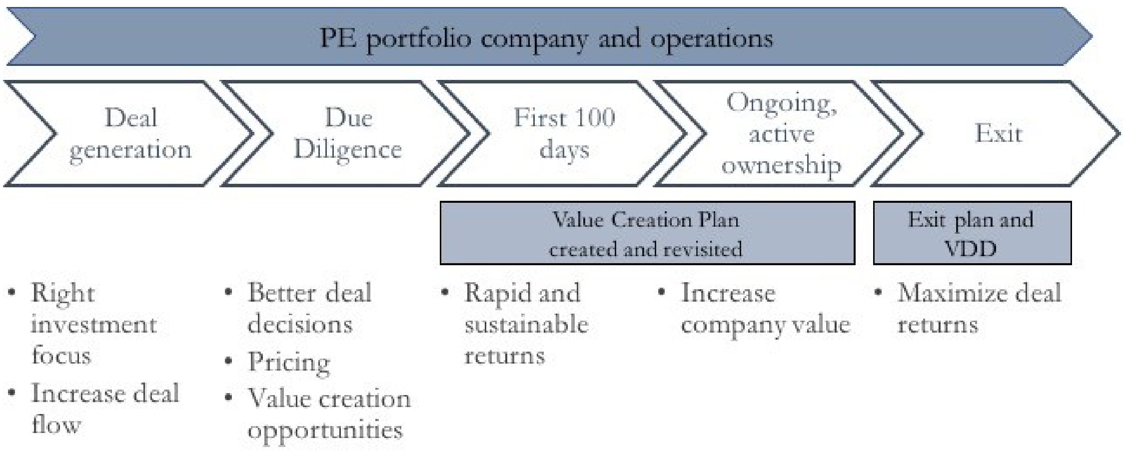


Figure 2: Portfolio company lifecycle

Even though in majority of cases private equity ownership has a positive effect on company performance, it is important to bear in mind that not all buyouts are successes (see e.g. Hobbs, Aubry and Thuillier, 2008; Aubry and Hobbs, 2011; Forrester Consulting, 2013). Wright, Hoskisson and Busenitz (2001) argue that asymmetry of information between managers, owners and investors can cause buyout investments to fail or not to reach their full potential of returns. Leveraged buyouts are proven to generate larger gains for shareholders, but Jensen (1989) argues that value gains do not accrue at the expense of other financial constituencies. Leveraged buyouts increase efficiency without massive lay-offs or substantial cuts in research and development investments. However, some researchers argue that the cost of leverage outweighs the benefits (Jensen, 1989).

Bruining, Verwaal and Wright (2013) differentiate between two distinct private equity models: a traditional financial investor and an active investor. The traditional financial investor seeks to create value through financial engineering and improved governance with strong financial incentives. They can increase company value through EBITDA impact, multiple impact and net debt impact. Private equity investors can also reintroduce mechanisms for inorganic growth in terms of mergers and acquisitions (Achleitner, Figge and Lutz, 2014). Operational efficiency is increased through combining different business units through adding-on acquisitions. Thus, the initial buyout firm acts as a platform (Wright, Hoskisson and Busenitz, 2001). They also limit cross-subsidization among business units and waste of free cash flow (Jensen, 1989). These buyouts often call for new governance mechanisms (Wright, Hoskisson and Busenitz, 2001). PE investors can also promote organic growth by increasing market share (see e.g. Achleitner, Figge and Lutz, 2014). Also, increases in leverage produce larger tax shields hence boosting returns by increasing cash flows (Guo, Hotchkiss and Song, 2011).

PE companies use various tools of active ownership adaptively to increase the value of their investments. Active investors take a more operational and attentive role in managing and steering their portfolio of companies. However, researchers (see e.g. Bruining, Verwaal and Wright, 2013) also note that there are both positive and negative effects related to active ownership. Active ownership implies positive changes for example in the way the company is managed and in its strategic growth orientation as well as in organizational culture (Wright, Hoskisson and Busenitz, 2001; Järvenpää, 2014). In addition, active PE investors are professional risk-takers: they balance between risk-seeking behavior and risk-mitigating measures (Berg and Gottschalg, 2004; Järvenpää, 2014). Value creation mechanisms of active investors are discussed in more detail later in this chapter and summarized in ***Table 1***.

It is also important to distinct between different kinds of buyouts and that both managers and investors are pursuing the same kind of buyout. For example, a collision and further failure is likely to happen if management seeks to undertake an efficiency buyout, but the PE investor has the mindset to pursue entrepreneurial buyout (Wright, Hoskisson and Busenitz, 2001). Moreover, Berg and Grottchalg (2004) have identified important factors affecting value creation comprising for example the relevance of specific characteristics of private equity investors such as technology industry and market expertise. On the other hand, differences in PE companies in term of backgrounds, capabilities and statuses also affect the additional value created by their portfolio companies (Järvenpää, 2014).

Table 1: PE investor value creation mechanisms

Type of value creation mechanism	Value creation mechanism	Examples of related literature
Governance and managerial efficiency	High leverage	Jensen (1989), Berg and Gottschalg, (2004)
	Powerful incentives	Jensen (1989), Berg and Gottschalg, (2004)
	Management system	Bruining, Verwaal and Wright (2013), Järvenpää (2014)
Alternative growth orientation	Mergers and acquisitions	Achleitner, Figge and Lutz (2014), Wright, Hoskisson and Busenitz (2001),
	Strategic growth orientation	Keenan *et al.* (2013), Bruining, Verwaal and Wright (2013)
Operational development	Entrepreneurship	Wright, Hoskisson and Busenitz (2001), Järvenpää (2014)
	Operational improvements	Guo, Hotchkiss and Song (2011), Wright, Hoskisson and Busenitz (2001)
	Improved strategy execution	Bobbel (2013), Crawford (2011)

2.1.1 Leverage and reduced agency cost

Jensen (1989) argues that PE houses rely heavily on leverage and buyout companies often have highly leveraged financial structures. Debt intensifies ownership incentives and managers have well-defined obligations to their creditors and claimants. Levers also force managers to pay debt payments rather than spend excess cash inefficiently. Jensen also argues that companies should distribute excess cash to shareholders to maximize value and to continue operating efficiently, but managers of public corporations are often reluctant to do so. Leverage also forces executives to avoid wasteful investment projects and reduce over-diversification (Wright, Hoskisson and Busenitz, 2001). However, Berg and Grottchalg (2004) note that in leveraged buyouts "debt per se creates no value, but value comes from operational efficiencies debt inspires."

PE houses create value by reducing agency costs. According to Jensen (1989), one of the most important contributions of private equity houses have been the resolution of conflict between managers and owners over the control and use of corporate resources. PE-held companies eliminate the conflict between interests of managers and owners without eliminating vital functions of risk diversification and liquidity due to high leverage (Jensen 1989). PE houses often make managers co-owners hence improving incentive alignment and by consequence, managers are more committed to the strategy. Thus, concentrated ownership drives agency costs down.

PE houses also pose strong incentives to monitor managers' actions (Berg and Gottschalg, 2004). Incentives are tied to cash flow and performance, and PE houses monitor company headquarters directly hence eliminating bureaucratic oversight. PE houses use tools such as pay-for-performance compensation system and substantial equity ownership of managers and directors to incentivize them (Jensen, 1989). Stricter monitoring and efficient incentives also affect organizational performance and efficiency (Wright, Hoskisson and Busenitz, 2001). To summarize, disciplining effects of leverage and aligned interests of managers and owners contribute to value generation and offer larger returns to invested debt and equity capital (Guo, Hotchkiss and Song, 2011).

2.1.2 Management system and governance

Successful PE investors can identify which type of management practices the portfolio company lacks and consequently create a balance between growth promoting and institutionalizing activities (Järvenpää, 2014). Some portfolio companies lack sufficient entrepreneurial mindset to promote growth, whereas others lack governance structure. PE investors drive institutionalizing through rigorous reporting and monitoring as well as structured key performance indicators. Institutionalizing activities of PE investors systematize performance monitoring and set challenging performance targets. Thus, PE investors can increase company value by simultaneously promoting both entrepreneurial and administrative management. In other words, PE houses can help companies to develop ambidextrous organizational change (Bruining, Verwaal and Wright, 2013).

Removing managerial inefficiencies also contributes to value generation in portfolio companies (Berg and Gottschalg, 2004). Fewer management layers and more decentralized management often translates to more agile and adaptive organization (Bruining, Verwaal and Wright, 2013). By consequence, leveraged buyout companies systematically opt for a less bureaucratic management structure with decreased corporate overhead.

Fast strategic decision making promotes growth. It is linked to subsequent growth and profit, and mediates the relation of dynamism, centralization and formalization (Baum and Wally, 2003; Bruining, Verwaal and Wright, 2013). Baum and Wally show a positive association between fast strategic decision making and company performance, which creates competitive advantage. The writers debate also that a combination of centralized strategic processes and decentralized operations produces the best results. They argue that centralized authority outweighs the importance of additional information decentralized organization could provide. Aligning interests of both board and executive management team not only reduces agency costs but also enables fast decisions. By consequence private equity investment portfolio companies must balance between decentralized organization to remain agile and centralized authority to ensure fast strategic decision making.

2.1.3 Operational improvements

Private equity investors systematically seek to streamline their portfolio companies. Research has demonstrated that improved operational efficiency creates value (see e.g. Guo, Hotchkiss and Song, 2011; Bruining, Verwaal and Wright, 2013). For instance, Acharya et al. (2014) state that “top, mature high performing PE houses create economic value through operational improvements” and thus can be considered a vehicle to carry out also organizational improvements. By consequence, a buyout generally results in improved operating performance. Improved operational efficiency can be achieved through i) increased sales and ii) decreased cost of goods sold (Wright, Hoskisson and Busenitz, 2001). PE investors can make operational improvements by driving cash flow increases through sales increases and margin expansion (Achleitner, Figge and Lutz, 2014). On the other hand, for instance centralized procurement improves cost of goods sold.

Operational efficiency increases can be driven by streamlined organizational processes, reduced workforce costs and decreased unit costs (Wright, Hoskisson and Busenitz, 2001). In addition, operational efficiency improvements also include cost cutting activities (Achleitner, Figge and Lutz, 2014). Streamlined capital expenditures and better working capital management affect operational efficiency, too. Reduced capital requirements in turn increase capital productivity and invite companies to rationalize corporate operations, and consolidate and reorganize operations (Berg and Gottschalg, 2004). Operational improvements can be achieved through governance engineering by improved and active monitoring and reporting procedures (Achleitner, Figge and Lutz, 2014; Järvenpää, 2014).

However, today gains achieved by driving operational performance improvements are significantly smaller than they were in the 1980s and variation is considerable. Yet gains from increased operational efficiency tend to be greater in cases where the CEO has been replaced and where active governance is in place, management selection careful and financial sponsors or bank lenders monitor the company actively (Guo, Hotchkiss and Song, 2011). Therefore, PE investors seek value creation also through other mechanisms.

2.1.4 Strategic growth orientation

Market leadership no longer guarantees financial success and thus creates a risk for companies that cannot keep up, but opportunities to those who can (Keenan *et al.*, 2013).

With ever decreasing possibilities for value creation through financial engineering and improved operational efficiency, private equity investors apply a series of other levers that create value and contribute to returns (Berg and Gottschalg, 2004). In contrast to exceling in operational efficiency, strategic positioning involves performing similar activities differently or significantly different activities to meet same customer needs (Crawford, 2011). Bruining, Verwaal and Wright (2013) argue that "to successfully meet future customer needs requires cognitive refocusing of CEOs and entrepreneurial changes in strategic, growth and resource orientation". Weak competitive position is tackled by revitalization that is by upgrades or incremental innovation but it does not guarantee long-term survival nor success. In other words, revitalization is considered a form of moderate innovation through renewing competitive capabilities. In PE investment context, revitalization activities emphasize long-term incentives and hence only a moderate level of leverage is recommended (Wright, Hoskisson and Busenitz, 2001).

According to Bruining, Verwaal and Wright (2013), "PE houses can also act as a cognitive refocusing device for buyout firms, giving a new strategic direction." PE houses often seek to increase strategic distinctiveness in their portfolio companies (Berg and Gottschalg, 2004). They participate in strategic planning and act as a sounding board to management team (Järvenpää, 2014). PE investors' contribution in strategic planning is crucial as 60% of companies struggle with formulating a strategy and more importantly with implementing it (Keenan *et al.*, 2013). PE investors help their portfolio companies in redefining strategic variables and promoting corporate refocusing (Berg and Gottschalg, 2004). Newly recruited CEO is often tasked with leading the strategic change and PE investor is then responsible for sparring and mentoring the CEO (Järvenpää, 2014). In general, the purpose of using a buyout as an organizational refocusing device is to execute a shift in strategic growth orientation (Bruining, Verwaal and Wright, 2013). Hence PE companies use buyouts as a tool to carry out strategic repositioning.

Value creation can also be realized through adding a completely unique perspective (White and Zeisberger, 2016). PE investors can make radical changes in the strategic direction of their portfolio companies through international expansion, mergers and acquisitions or adapting a new strategic direction through positioning, growth type and pace (Järvenpää, 2014).

2.1.5 Improved strategy execution

In addition to contributing to strategic planning and seeking value creation through strategic distinctiveness, PE investors equip their portfolio companies with strategy execution tools considering that strategic planning becomes meaningless in the absence of a way to execute planned strategy. Crawford (2011) argues that 70% of implementation of strategic initiatives fail since they require adopting and implementing new practices that would lead to world-class performance. However, there are no dominant approach of deploying a strategy, but corporate programs and strategic initiatives are vastly considered as vehicles to execute organization's strategy (Crawford, 2011).

Corporate programs are vehicles for strategic renewal and can be designed in various ways. Boppel *et al.* (2013) identify three distinct models for corporate programs: goal splitting, overlay and task force. While goal splitting is best for optimizing activities by specifying goals and assigning key initiatives to business unit managers or country managers; task force and overlay have a more strategic approach. Task force is often a synonym for project or program management office: it is designed to drive a small number of strategically meaningful topics. It often has focused funding and is monitored by the CEO. Overlay design adds to task force design and is best for situations of radical change and in turnaround situations.

Managing change requires both hard and soft skills: soft skills consisting of communication, achieving organizational buy-in and aligning implementation whereas hard skills refer to traditional task force approach of creating program infrastructure, identifying and understanding business drivers as well as defining deployment actions (Saunders, Mann and Smith, 2008). Companies fail especially in communicating their strategy to employees and thus they lack buy-in in the new strategy and therefore in strategic initiatives. Furthermore, executives lack knowledge of their own business and hence initiatives are more likely to fail. Third, executives often use only financial measures forgetting non-financial measures that can be even more essential in measuring success of strategy execution (Crawford, 2011; Keenan *et al.*, 2013). Boppel *et al.* (2013) summarize "corporate programs need buy-in from the line organization and should be integrated to ongoing operations" in order to succeed in contributing to strategy execution.

PE houses also contribute in professionalization activities in their portfolio companies: more professionalized strategic planning becomes conceptualized and focused. During the strategic planning investors participate in the development of medium-term value creation plan (Järvenpää, 2014). More professionalized strategic planning also means that board and CEO need to decline growth ideas of top management. However, focused strategic planning contributes to value creation, not only in terms of creating strategic distinctiveness, but also in terms of improved resource allocation and project prioritization (Berg and Gottschalg, 2004).

2.1.6 Promoting entrepreneurship

In addition to increasing administrative management practices for instance in terms of better governance, monitoring and strategic planning, PE ownership often results in increases in entrepreneurial management practices, too (Bruining, Verwaal and Wright, 2013). Companies can pursue both management practices in parallel, hence they are not mutually exclusive.

Buyouts can be a tool for entrepreneurial growth and upside growth. In contrast to simply refining strategic growth orientation, promoting entrepreneurship is a vehicle for renewal which leads to strategic innovation (Wright, Hoskisson and Busenitz, 2001). Private equity investors can pursue substantial organizational turnaround by promoting innovation: Strategic innovation is a radical form of revitalization and consists of newly conceptualizing the business (Wright, Hoskisson and Busenitz, 2001; Järvenpää, 2014). Radical revitalization of buyout companies offers PE houses opportunities for significant value creation.

In addition to pursuing strategic innovation, private equity houses can also help buyout firms to develop and implement new entrepreneurial view on their business (Bruining, Verwaal and Wright, 2013). Researchers have observed that some companies show an increase in entrepreneurial ventures, in technology alliances and in R&D spend under PE ownership. According to Wright, Hoskisson and Busenitz (2001), buyouts are a common vehicle for entrepreneurial activities. Entrepreneurial mindset and strategic innovation are strongly interlinked.

However, private equity investors should pay close attention to case company's strengths and weaknesses in terms of managerial capabilities before facilitating entrepreneurial growth. Entrepreneurial mindset of only one executive can already create entrepreneurial dynamics. Entrepreneurial dynamics affects strategic decision-making and whereas accountability, compensation schemes, structure coordination and justification of future developments can inhibit innovation (Wright, Hoskisson and Busenitz, 2001; Järvenpää, 2014). Entrepreneurial mindset and strategic innovation is best in situations where there have been misalignments of incentives and managerial frustrations prior to the buyout. These corporate inefficiencies are opportunities for buyouts for entrepreneurial growth (Wright, Hoskisson and Busenitz, 2001).

2.2 Project and program management offices

Project and program management offices come in all shapes and sizes considering that they must exercise both customization and sustained effort (Desouza and Evaristo, 2006). PMOs are commonly tailored to fit different organizational needs and to achieve different goals in various situations.

2.1.1 PMO mission, objectives and characteristics

Project management office's mission is a triangle of enabling strategic alignment, organizational excellence and operational excellence. According to Forrester Consulting (2013), PMO's mission is to "move the strategic needle for the company". In order to do so, it must contribute in four strategic value drivers:

i) PMO must have a clear strategic vision which enables it to pursue right strategic initiatives at the right time

ii) It must drive business success through consistent delivery practices: well-designed, broadly understood, highly usable and adaptable approaches

iii) PMO enables organizational change needed for growth by embracing education and evangelism

iv) And last, it must play an active role in brand ownership

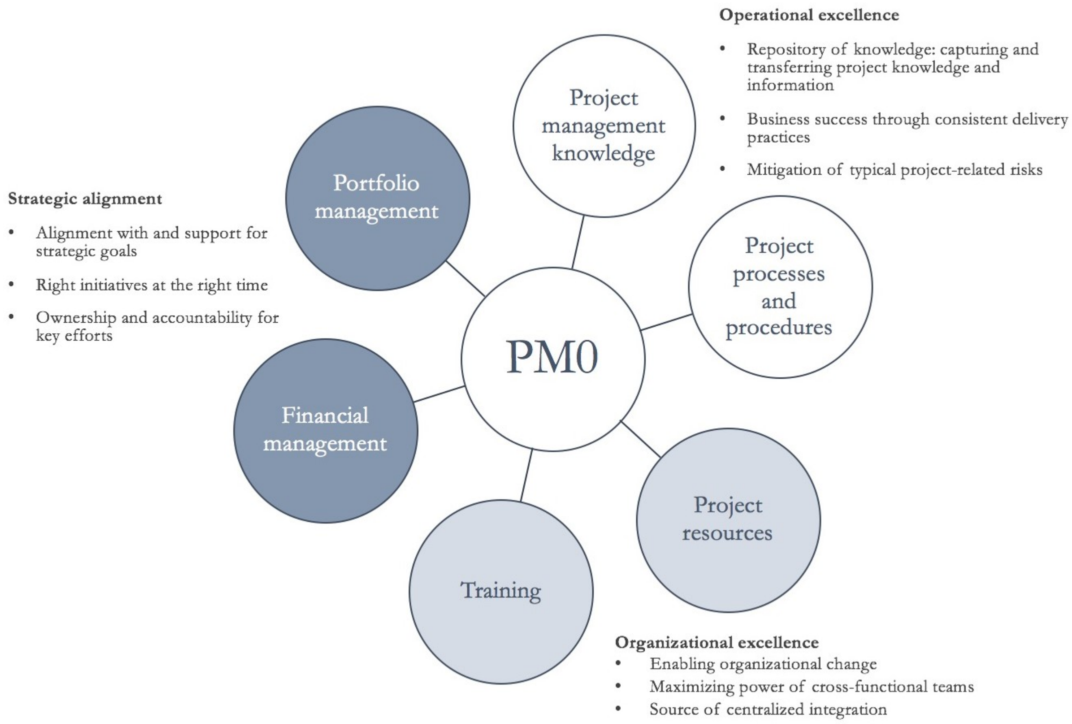


Figure 3: PMO mission and objectives

In addition, most PMOs have certain characteristics in common. First, they ensure that projects undertaken are aligned with and support the strategic goals. They are responsible for contributing to the success of project management in the organization. Third, they are often separate, independent units within the organization composed of e.g. experienced business and technology professionals. And last, they are responsible for developing standards and methodologies for project management in the organization (see e.g. Desouza and Evaristo 2006; Crawford 2011). PMO characteristics, tools and methodology are summarized in ***Figure 3*** and discussed in more detail later in this chapter.

Strategically meaningful PMO has two primary missions: first, to improve organization's project management maturity and second, to link organization's projects to its strategic plans (Crawford, 2011). According to Thorn (2003), "anything less is costly misapplication of scarce resources". Thus, senior management needs to communicate strategic drivers to the PMO. There must be a fit between these drivers and the project management system to maximize the value from projects (Cooke-Davies, Crawford and Lechler, 2009). Project management maturity is enhanced and built based on project management system. It reflects senior management's perspective on the strategic role of project management (Cooke-Davies, Crawford and Lechler, 2009) and hence its strategic importance.

2.1.2 Advantages of a PMO

There are several reasons for establishing a project management office. Companies form project portfolios and establish PMOs to manage their portfolio because projects are becoming shorter, more market-driven and the deliverables are more and more intangible (Crawford, 2011). Hence the management of such projects is becoming more and more complex. Forrester Consulting (2013) has identified three distinct catalysts that often result in implementing a PMO: i) a fatal failure of a very visible project ii) a project goes severely over budget or iii) the market competition forces stronger disciplines. Conversely, if a PMO enables success of a strategic project, can that too be a stimulus for implementing an organization-wide PMO.

Organizations may also seek to gain control over their project efforts where PMO acts as a fundamental unifier of project activities. In addition, PMOs are a tool to establish and maintain a set of project management practices. The objective is to formalize project management oversight and improve project success (Letavec, 2006; Crawford, 2011). PMOs are commonly established to promote project culture, too. Ergo, PMO becomes a visible "face" for project and program management and thus promotes organizational awareness (Letavec, 2006).

There are substantial benefits in implementing a PMO. Studies have demonstrated a positive effect of portfolio management quality on portfolio success. Structured project management ultimately affects bottom-line (Dai and Wells, 2004; Ibbs, Reginato and Kwak, 2004; Unger, Gemünden and Aubry, 2012) and thus generates greater yields. Organizations with a high performing PMO demonstrate above average financial performance (Project Management Institute, 2013a) while Unger, Gemünden and Aubry (2012) argue that PMO's role is instrumental in attaining value from an organization's investment. However, researchers (Hobbs, Aubry and Thuillier, 2008; Aubry and Hobbs, 2011) debate that a clear demonstration of the direct influence of project and program management on return on investment is not easily accomplished. Project Management Institute (2013a), too, acknowledges PMOs' difficulty in demonstrating their value despite various studies. Forrester Consulting's (2013) study indicates that in terms of building project culture and establishing project management system, PMO is likely to realize its value in two years.

A high performing PMO enables executives and managers to implement strategies: it empowers executives with greater agility and enables them to achieve better business outcomes. PMOs play a key role in achieving differentiation in the market and sustaining business growth. At project level, PMO ensures strategic project selection and contributes to successful delivery, reduced operational costs and increased employee satisfaction (Forrester Consulting, 2013). Crawford (2011) summarizes "without a project focus at the highest level of the business, projects seem to pop up at will across the organization generating confusion." How PMO is structured and, in turn, how growing organizations invest in and develop them enables organizations drive more positive results from a PMO (Project Management Institute, 2013a).

To fully exploit program management office, organizations need to create organizational awareness of the benefits of the PMO. Low performing organizations accept project management offices as an organizational unit but projects still are executed inconsistently (Project Management Institute, 2013a). Thus, organizations don't make the most of their PMOs and return on investment is significantly lower. It is crucial to articulate what is expected from the PMO and how the PMO should improve project and program results in order to realize its full value (Letavec, 2006). Most importantly, PMOs must be strategically aligned with executive management (Forrester Consulting, 2013). Desouza and Evaristo (2006) summarize the benefits and value from PMO: it is “seen to combine the deliverable and focused discipline of project management with the conceptual and analytical strengths of business consultancy.”

2.1.3 Establishing and developing PMO

Researchers have identified steps that an organization should take when establishing a PMO. Building a PMO framework begins with an organizational culture of project management. It requires a proper credence, that is, management authority as well as support and tools. It should have both a clear direction and governance. Second, building a PMO framework requires continuous evaluation by the PMO.

Building a PMO framework is a continuous process of evolving and improving through knowledge management and change management. Learning and improving is a key aspect in creating a high performing PMO. To facilitate learning and improving, a continual feedback loop between C-level executives and PMO should be built. As “all strategic change in organizations happens through projects and programs” (Project Management Institute, 2013a), practices must be in place to transfer insights and experiences from projects into organizational knowledge. Therefore, PMOs role is crucial in building intangible knowledge repository in organizations.

Project management office should implement precise project metrics and introduce project owner evaluations in the establishing phase. PMOs assess project quality essentially through KPIs but also by seeking and collecting feedback from stakeholders and customers and (Project Management Institute, 2013a). Moreover, Unger, Gemünden and Aubry (2012) argue that program management office should be measured, too. Even though measuring project performance is one of PMOs key responsibilities, measuring PMO value is difficult and more complicated than measuring project performance. According to Aubry and Hobbs (2011) there are three distinct ways to look at the PMO performance: project management success, project success and corporate success where corporate success consists of processes and decisions that translate strategy into programs and projects. On the other hand, Forrester Consulting (2013) has identified a series of metrics that help in measuring PMO value. PMO metrics according to Aubry and Hobbs and Forrester Consulting are summarized on ***Table 2*** below.

Table 2: PMO metrics

Program	KPI type
Operational performance	• Risks and risk management • Safety • Resource utilization • Quality
Portfolio performance	• Revenue • Margin • Performance • Alignment of spend with objectives
Project performance	• Budget controls • Earned value • Outcome • Customer satisfaction

2.1.4 PMO's organizational position and role

PMOs take many different roles, may have different forms and contribute to organizations in many ways (Hobbs, Aubry and Thuillier, 2008; Thamhain, 2004; Winch, 2004). This contribution is separate from the contribution to projects.

Considering PMO's strategic importance, they are often centrally placed in the organization (Project Management Institute, 2013a). Project or program management office is generally a small unit outside of other, major organizational units. Their independence from other organizational units enables them to be agile and to quickly respond to altering situations. Their ability to adapt and embrace only necessary disciplines is equally important in promoting project success (Aubry and Hobbs, 2011; Forrester Consulting, 2013). Due to their central organizational location, PMOs can sense tensions and conflicts in the organization (Project Management Institute, 2013a) but because of their independency, can also contribute to conflict resolution.

Aside from its central organizational home, PMO can play different roles. PMOs role in project management and developing project management system is crucial, but they also need to seek ways to incorporate process development and improvement in program management (Winch, 2004; Project Management Institute, 2013b). Project or program management office has primarily three roles: coordinating, controlling and supporting – all of which affect performance equally (Unger, Gemünden and Aubry, 2012). Following Unger, Gemünden and Aubry's (2012) role categorization, results of other studies regarding PMO roles (Crawford, 2011; Keenan *et al.*, 2013) are summarized in the ***Table 3*** below.

Table 3: PMO roles and responsibilities

	Controlling role	Coordinating role	Supporting role
Responsibilities	• Project review and analysis • Documentation • Standard methodology • Risk management	• Resource evaluation • Prioritization • Communication	• Evangelist • Therapist • Project coach • Competency center and development of expertise

Based on Unger, Gemünden and Aubry's (2012) study controlling and coordinating roles impact the project portfolio management quality and thus predict portfolio success. Coordinating and controlling roles emphasize PMO's role as a repository of expertise and guidance for individual project support whereas supporting role is essential in achieving overall organizational benefit (Thorn, 2003; Thamhain, 2004).

In addition to defining the role of PMO, one should clearly differentiate the roles of project managers and PMO. When project managers focus on day-to-day activities of managing projects, PMO's should focus on the business aspects of projects and how they contribute to overall business objectives (Patanacul and Shenhar, 2012). It is also PMO's responsibility to ensure steady flow of strategic initiatives and projects to achieve strategic objectives (Saunders, Mann and Smith, 2008). The above-mentioned responsibilities highlight the importance of PMO in meeting the business objectives. To summarize, PMOs role is often considered a consulting organization within an organization (Letavec, 2006).

2.1.5 PMO frameworks

According to Project Management Institute (2013a), there are a variety of PMO structures. Structures differentiate in terms of how they act, tasks they perform and the way they implement strategy. Also, Project Management Institute's study emphasizes that there is no right form of PMO neither a formalized model nor is there a standard consensus over situational fit. However, it is important to note that structure does affect the power PMO exercises and influences PMO wields. In other words, structure matters.

Different PMO frameworks affect the organization and project performance differently. According to Thorn (2003), there are three levels of PMOs: a project repository, a project coach and an enterprise project office. Forrester Consulting (2013) categorizes PMO frameworks to customer facing PMOs and business PMOs. However, Forrester's framework categorization is based on project deliverables, and they can operate at any level of PMO.

Secondly, PMO scope affects the structure it embraces. Project specific PMO has the highest level of business value realization and reports directly to chief executives (Project Management Institute, 2013a). Project specific PMOs are typical for instance to large and complex IT-projects. By elevating PMO to strategic decision-making level, organization creates an enterprise-level PMO: it coordinates project portfolio at the highest strategic level. In addition to identified PMO structures (Thorn, 2003; Forrester Consulting, 2013; Project Management Institute, 2013a, 2013b), PMOs can also be categorized based on knowledge-based archetypes. Knowledge-based architypes are interdependent with PMO roles and by adopting an architype, PMO also appropriates roles and responsibilities. For instance, objectives of the PMO and project maturity of the company affect the PMO framework the company should establish (Desouza and Evaristo, 2006). PMO frameworks are summarized in ***Table 4***.

Table 4: PMO frameworks

PMO framework (PMI, 2013b)	Organizational Unit PMO	Project-specific PMO	Project Support PMO	Center of Excellency	Enterprise PMO
Level of influence (Desouza and Evaristo, 2006)	Operational level	Tactical level	Operational level	Tactical level	Strategic level
Knowledge based architype (Desouza and Evaristo, 2006)	Information Manager Coach	Knowledge Manager Supporter	Supporter	Knowledge Manager Coach	Information Manager Knowledge Manager Coach

PMO framework defines purpose, form, mission and make-up of the PMO (Project Management Institute, 2013b). However, the challenge is to identify the right kind of PMO framework that matches both the organization and it's needs as well as strategy the company wishes to implement through PMO.

2.1.6 Project management system

Project management office is a center of organizational knowledge for project management practices, techniques and standards (Letavec, 2006). Together practices, techniques, standards and methodologies form a project management system. PMO also facilitates process maturity and ensures that project performance is valued (Aubry and Hobbs, 2011).

PMO is responsible for establishing smart, simple processes that translate into manageable routines to track progress (Baum and Wally, 2003). Managing strategic initiatives requires instituting well-defined processes that include routines to track and monitor progress. Smart and simple processes also enable identifying possible issues early. When scope and difficulty of projects increase, an evolutionary improvement from ad hoc immature processes to consistent, mature and disciplined processes can be witnessed. It stresses the ability to establish and follow consistent processes (Thorn, 2003). In addition, PMO contributes to project success through improved monitoring and controlling, and thus provides an oversight over ongoing operations as well as evaluates their contribution long-term strategies (Berg and Gottschalg, 2004). Routine structures also retain valuable information and act as an organizational memory system (Baum and Wally, 2003).

PMO promotes proactive decision making through consistent project data whereas inconsistent data leads to reactive decisions. Consistent data is essential for objective, fact-based decisions that drive right strategic initiatives and investments. Additionally, PMO also collaborates in many networks and play a central role in the circulation of both intangible and tangible information (Aubry and Hobbs, 2011). Secondly, PMO's central organizational home exposes it to intangible, organizational knowledge (Project Management Institute, 2013a).

PMO is also key provider of project status information. As a central body of project information promoting transparency PMO also contributes to enhancing broad organizational commitment (Letavec, 2006; Forrester Consulting, 2013). PMO provides transparency by communicating actions and fostering collaboration between business functions hence increasing mutual trust and respect. PMO should also communicate current achievements against targets and provide an enterprise-wide perspective to the top management (Letavec, 2006; Keenan *et al.*, 2013). According to Keenan *et al.* (2013), what is being tracked and communicated conveys to the organization what is critical to success. Crawford (2011) also reminds that one cannot manage what one cannot measure.

PMO is responsible for setting meaningful milestones (Keenan *et al.*, 2013). Milestones help PMO and consequently executives to determine whether the company is moving towards the desired goal (Crawford, 2011). Gaining and maintaining project control over project effort is about application of standards of performance, that is, metrics (Thorn, 2003). Metrics and key performance indicators, KPIs, support milestones in progress tracking. It is essential to tie all metrics to strategic business objectives and thus ensure that objectives are also actionable. It is recommended to include in the project metrics the same strategic measures as overall business strategy is measured with, hence linking projects to strategy (Patanacul and Shenhar, 2012; Forrester Consulting, 2013). High performing PMOs often use standard financial controls such as budget variance and earned value to measure project performance. In terms of KPIs, simpler is often better (Forrester Consulting, 2013; Project Management Institute, 2013b). PMO should report progress weekly or monthly for example in respect to project delivery against schedule, customer feedback evaluations and cost reviews (Project Management Institute, 2013b).

In addition to project control, metrics and KPIs bring a new level of transparency to executive management.

PMO is responsible for ensuring that the organization invests in project management tools. List of available project management tools is extensive (see e.g. Crawford, 2011; Keenan *et al.*, 2013). However, among the most used tools are meaningful milestones and objectives, KPIs and metrics as discussed earlier. Roadmaps for initiatives and rigor test often belong to the PMO tool box, too. Rigor tests are meant to assess if the initiative supports overall objectives and strategy. PMOs are also likely to set up policies regarding project initiation, monitoring and closure. Project management tools support project management system and should be used adaptively depending on organization's project management maturity.

PMO should develop or adopt a project prioritization framework, and include it in the project management system. First and foremost, projects should contribute to strategy. Criterion should also ensure portfolio equilibrium in terms of risk, and short and long-term benefits. Adopting rational goals conception consists of selecting right projects that affect directly bottom line (Aubry and Hobbs, 2011). Prioritization framework should also provide a decision framework to terminate unsuccessful initiatives not contributing to the strategy (Saunders, Mann and Smith, 2008).

In addition to project selection, strategic portfolio management consists also of resource allocation guided by overall strategy (Patanacul and Shenhar, 2012). From resource management perspective, PMO makes sure right people are working on right projects regarding both project manager and project personnel. Allocation and efficient use of resources affect program and portfolio performance (Aubry and Hobbs, 2011). According to Project Management Institute, 36% of organizations list insufficient resources, either in numbers or skills, one of the biggest barriers to successful strategy implementation (Project Management Institute, 2013b). Selection of adequate resources assists in maintaining the continuity between the selection and execution phases, too. PMO is also responsible for ensuring that the organization invests in right human capital and embraces the core competences of project managers (Forrester Consulting, 2013, Desouza and Evaristo, 2006; Keenan *et al.*, 2013). Their role is equally important in fostering talent and capabilities within the organization, notably management and leadership skills. PMO should discipline and monitor the performance gap closely particularly in organizations whose main business is not project-driven. PMO is also responsible for input and buy-in of project personnel.

2.1.7 PMO as a vehicle for strategy implementation

The explicit goal of project management and projects in general is to create competitive weapons and differentiators for organizations (Keenan *et al.*, 2013). Project Management Institute (2013a) accentuates that "the alignment of the PMO to the goals of the organization is key to driving strategic implementation." Traditionally projects are considered as tools for implementing organizational strategy and achieving overall business goals (Thorn, 2003; Morris and Jamieson, 2005; Patanacul and Shenhar, 2012). PMO manages multiple set of projects and ensure implementation of their strategic objectives (Unger, Gemünden and Aubry, 2012). As projects are used as a mean to execute strategy, is project management no longer an operational discipline but a strategic discipline (Cooke-Davies, Crawford and Lechler, 2009). Managing corporate project portfolio has thus become a strategic management issue: it manages projects through a strategic lens, thus generating real value (Crawford, 2011).

PMO is where project portfolio management and strategy most seamlessly meet. High performing PMOs also take part in the strategy formulation (Project Management Institute, 2013a). According to Keenan *et al.* (2013), "Aligning projects with strategic objectives has the greatest potential for adding value to the organization." Consequently, PMO is the link between not only strategy and projects, but also with executive vision (Crawford, 2011; Keenan *et al.*, 2013). Project selection is tied to overall strategy through project strategy (Patanacul and Shenhar, 2012). However, researches debate that companies often lack an organizational entity responsible for mapping and matching strategy and projects. Crawford (2011) notes that "the concept of having someone in the organization to look at the strategic objectives with respect to ongoing projects is still very new in many organizations." PMO's role as a strategy executor does not come without expense. PMO must to be aware of the risk of becoming simply a box-checker losing strategic approach. On the other hand, PMO should not execute and implement projects itself, but focus on managing the portfolio or program.

2.1.8 Critical success factors of PMOs

Earlier studies have identified several critical success factors for high performing PMOs. Most important factor leading to success is executive support and buy-in (Saunders, Mann and Smith, 2008). Leadership support will also provide PMO with sufficient leverage. After securing executive buy-in, management must also define the role of the PMO and position PMO in the organization (Project Management Institute, 2013b). High performing PMOs have a seat at the executive table and they also take part in strategic planning. They provide feedback to the executives about operational metrics and thus help them in shaping the strategy.

Moreover, Project Management Institute (2013a, 2013b) emphasizes the effect of skilled PMO personnel in project and program success. High-performing PMOs succeed in aligning business stakeholders and operational excellence (Forrester Consulting, 2013). PMO's high performance also translates into project success and it is strongly related to project management processes. Organization's project strategy and project context also affect project success. However, unconditional use of beforehand selected project management model can result in project failure (Cooke, Davies, Crawford & Lecker 2009; Forrester 2013). Thus, PMO is responsible for applying necessary and suitable controls and methods.

Even though PMOs' contribution to strategy execution, more efficient use of resources, and for instance project success are justified in existing academic literature, there are many reasons why and how PMOs fail despite the value they can bring to project management and especially to strategy execution. According to Forrester's study, strategic PMOs face universal challenges regardless of the industry, company size or project management maturity (Forrester Consulting, 2013). Notwithstanding their value generation abilities, only 33% of PMOs realized their full value according to a survey completed by Project Management Institute (2013b). In addition, the legitimacy of PMOs is challenged in 50% of the organizations having a PMO (Hobbs, Aubry and Thuillier, 2008). Thorn (2003) argues that if overseeing projects and project personnel is not directly under its control, PMO's value is challenged in organizations almost daily. These differences in perception and appreciations can lead to conflict and hinder PMO performance. Tensions between a PMO and other organizational units in turn can prevent the PMO from performing at the highest possible level. Organizational resistance to change, especially in organizational turnaround situations, is likely to hamper PMO's performance (Forrester Consulting, 2013). Central position and reporting directly to high executives gives the PMO the required authority to make strategic decisions and take responsibility for their outcomes (Forrester Consulting, 2013). However, lack of direction from the top and lack of clarity of purpose can pose challenges to value creation (Project Management Institute, 2013b). To summarize, PMO's productivity is directly linked to its legitimacy.

Project managers recognize the importance of a PMO in human resource management and in setting rational goals criteria but it is equally important for project managers to acknowledge the importance of PMO regarding internal processes (Aubry and Hobbs, 2011). In contrast, financial managers do acknowledge PMO's contribution to organizational processes as one of its most important contributions. Lack of cohesiveness both in project management practices and organizational processes can hinder value creation (Project Management Institute, 2013b). Failures due to inconsistent project management expertise performance accentuates the importance of establishing project management system and processes.

Managerial failures such as lack of consistency in management, especially in terms of project estimation and budgeting, lack of formal tracking and lack of functional user involvement can also contribute to project failures (Desouza and Evaristo, 2006). Metrics must be viewed constructively: if they contrast with overall business goals, are they likely to lead to project failure (Thorn, 2003). In addition, inconsistent assessment of current capabilities damages project success, and consequently affects also PMO performance. With shifting priorities and faster delivery cycles, PMOs do struggle with providing adequate support to organizations and promoting project success (Forrester Consulting, 2013).

Lack of common project-related language is also likely to cause tensions and lead to project failure (Forrester Consulting, 2013). PMOs should seek resolution to communication-related issues through an interface of systematically introducing, communicating and managing the elements of project management and control (Thorn, 2003). Feeble knowledge management often results in project failure: Poor communication and knowledge transfer as well as inadequate reuse of information derived from past projects are some of the primary reasons researchers have identified for project failure (Desouza and Evaristo, 2006). Projects can be delivered on time and meet the expectations but still regarded as failures if they don't contribute to the strategy (Crawford, 2011). It is no longer sufficient to meet the project objectives, but projects need to contribute to meeting the business objectives, too (Patanacul and Shenhar, 2012).

2.3 PMOs in PE investment portfolio companies

One may ask why companies are able to pull the value creation levers in a buyout context but, not able to do so before. High agency costs, that is, misalignment of incentives between managers and owners, creates inefficiencies. If there's a mismatch between appropriate control posed by the PE house and entrepreneurial mindset of the buyout firm, the buyout firm is likely to underperform or go bankrupt (Wright, Hoskisson and Busenitz, 2001). PMO is responsible for executing strategic initiatives mutually agreed by managers and owners reducing agency costs and improving operational effectiveness (Berg and Gottschalg, 2004). Execution skills are strongly related to success and operational expertise (Kaplan and Norton, 2008), which explains why executives often turn to PMOs to execute strategically meaningful initiatives. PMO's contribute in setting a corporate vision through projects while still paying attention to fundamentals: taking care of and monitoring e.g. basic controls, plans, and budgets. They adopt minimum viable approach by applying only necessary controls, and hence does not burden the organization. As Kaplan and Norton (2008) summarize "operating value creation strategies might play a significant role in PE deals." According to Project Management Institute (2103b), high performing PMO correlates directly with better strategy execution. They also drive superior business value.

The need for PMO in managing strategic initiatives stems from tactical initiatives no longer being sufficient. There is a need for a strategic approach (Keenan et al. 2013). Project management teams should consider the business aspect of the projects they manage to better support the business strategy and sustainability of their company (Patanacul and Shenhar, 2012). However, Patanacul and Shenhar (2012) also note that managing projects in a strategic way does not mean abandoning the operational perspectives. Regarding PE portfolio companies, investors' intervention and support can be very short term oriented which in turn can affect e.g. project selection. Consequently, long-term goals may get lost in concern for short term profits without project portfolio management (Berg and Gottschalg, 2004; Crawford, 2011).

In rapidly changing business environment PMO can focus on the most strategic initiatives when line managers and business unit managers tend to have only little tolerance for perceived overhead. Rapid change and turbulence have driven companies to form PMOs to implement strategic initiatives (Keenan *et al.*, 2013). Thorn (2003) emphasizes the meaning of projects in strategy implementation: companies need to implement essential projects to ensure company growth and PMOs promote culture that embraces organizational excellence (Forrester Consulting, 2013).

High performing PMO nurtures other capabilities impacting directly financial performance (Project Management Institute, 2013b). Not only does a PMO contribute to strategy execution and project success, but it also supports overall health and growth of the organization (Thorn, 2003). A PMO can contribute to encouraging culture of change and change management while managing the project portfolio (Forrester Consulting, 2013; Keenan *et al.*, 2013). PE companies must promote development of ambidextrous culture and simultaneously to seek growth opportunities and maintain sufficient level of administrative management (Järvenpää, 2014).

2.4 Synthesis of the literature review

The objective of the literature review was to answer the question *1) How do private equity investors seek to create value in their portfolio companies?* Based on previous academic research, private equity investors' value creation mechanisms can be divided into two main categories: professionalization and revitalization (Järvenpää, 2014). More traditional view on PE investor value creation and capture is based on operational improvements, valuation multiple and high leverage creating e.g. tax shields and increasing cash flow (see e.g. Keenan *et al.*, 2013; Achleitner, Figge and Lutz, 2014).

Furthermore, PE investors operate on three key value creation levels. First, they provide strategic advice and steer their portfolio companies with renewed strategic growth orientation and improved strategy implementation. Second, their offer operational advice e.g. by driving operational efficiency. Under PE ownership, several operational improvements, e.g. allocation of resources and choice of incentives, will likely to be carried out (Järvenpää, 2014). And last, they improve monitoring and reporting and involvement in decision making (Järvenpää, 2014). Decreased agency costs and aligned interests contribute also to operational and management efficiency (Jensen, 1989).

Perspective planning, whether privately owned or publicly listed company, begins with defining a strategy followed by actions and project to be completed within a portfolio or program (Keenan *et al.*, 2013). Hence, the second part of the literature review aims to answer the question *2) How can a PMO contribute to value creation in context of a leveraged buyout company?* PMO links mission, vision and a plan (Thorn, 2003) and thus acts as a bridge between executive vision and value creations mechanisms, such as operational improvements the PE investor wishes to pursue. In addition, PMO brings to the company a consistent way to evaluate, select, prioritize, budget for and plan the "right" projects that contribute to the strategy execution and have the greatest value to strategic interests (see e.g. Crawford, 2011; Keenan *et al.*, 2013). Thus, PMO contributes to improved strategy execution. As a result, it should produce a clear, business-oriented value proposition (Thorn, 2003; Unger, Gemünden and Aubry, 2012). In addition, PMO should be accountable for delivering demonstrative improvement (Forrester, 2013).

Although both private equity investments and their value creation mechanisms and PMOs are extensively studied topics, use of PMOs as a value creation mechanism in leveraged buyout investments is not well researched. This study thus aims to answer the question *How and under what circumstances can private equity investors create value in their portfolio companies using PMO?*

3 METHODS

3.1 Methodology

The amount of academic literature on private equity value adding mechanisms and their impact on firm performance is extensive. Despite the substantial amount of academic literature on project and program management offices, the mechanisms behind the use of program management offices in the context of private equity portfolio companies is not fully understood. In view of the explanatory nature of the research question "*How* can private equity investors create value using PMOs" and how it combines two previously disconnected research fields, PE investment value creation and project management offices, case study is the most suitable research methodology for this study (Eisenhardt, 1989; Yin, 1981). Also, considering the research problem, a multiple case study is more appropriate methodology. Multiple case study enables comparison between cases that will reveal systematic patterns across cases. Consequently, a multiple case study enables building testable theories whereas single case study builds only on limited theory and evidence (Eisenhardt, 1989; Garg and Eisenhardt, 2016). It should also be noted that the purpose of a case study method is not to test hypotheses or to provide statistically significant results but to generate theoretically meaningful insights on the studied phenomenon (Eisenhardt and Graebner, 2007).

Multiple case study method utilizes replication logic, that is, different cases are treated as distinct experiments. Thus, the objective is to improve analytical generalizability of the results (Yin, 1994). Case study method is highly iterative and tightly linked to data (see ***Figure 1***). Data analysis frequently overlaps with data collection; hence case study can be described as a joint process of collecting, coding and analyzing data (Corbin and Strauss, 1990). In addition, the process is inductive in nature.

3.2 Unit of analysis and scope

The units of analysis in this study are companies that currently belong to a private equity company's investment portfolio. Companies that have had or are currently running a project or program management office during the study are in the scope of the study. In addition, companies that have considered running a PMO, but decided to pursue development initiatives within another framework are examined. Studying these companies ensures that circumstances under which PMO is *not* a suitable value creation method are also thoroughly understood.

For the purpose of this study, the industry in which the case company operates is indifferent. Even so, the case companies are selected so that they cover different industries in terms of, for example, size, maturity and growth pace to better understand the *circumstances* under which value can be created using a PMO. Correspondingly the case companies are of different size and at different life stages of private equity investment to provide sufficient variety and coverage of different circumstances.

In terms of the time frame of the study, case companies have run a PMO during 2011-2017. Companies that had run a PMO or initiated a PMO before that time frame operated in an essentially different macroeconomic environment mainly due to the financial crisis of 2008. The purpose of this time frame is to eliminate PMOs that were initiated years *before* the financial crisis in a significantly different economic situation and right *after* the financial crisis to e.g. minimize its consequences and to survive it. Hence, analyzing these PMOs would not be relevant for this study.

In addition, this study focuses on PMOs as a value creation mechanism for private equity investors. Firm-level, operational mechanisms that PE investors can use in order to improve the performance of their portfolio companies are discussed in the literature review. However, other value creation mechanisms such as financial engineering and increased leverage are briefly listed in the literature review and taken into consideration in the case selection phase but are not in the scope of this study. Last, the study focuses on using PMO as a value creation method and thus, excludes from the analysis investment-level performance measures such as return on investment, internal rate of return and valuation multiple as majority of the companies haven't been exited and consequently, value captured at exit is not yet calculable.

3.3 Case selection

Case study method suggests that cases are chosen by following theoretical rather than random sampling (Eisenhardt, 1989). Cases are selected deliberately and so that they, for example, provide examples of polar types or fill theoretical categories suggested by existing academic literature (Eisenhardt, 1989; Eisenhardt and Graebner, 2007). By using theoretical as opposed to random sampling, selected cases constrain extraneous variation, sharpen external validity and represent a theoretically useful population. Theoretical sampling supports the above-mentioned replication logic by allowing one to compare, for instance, diverse environmental and situational factors leading to different PMO frameworks. Short case descriptions are grouped in Appendix A.

Relevant theoretical categories that were used in the sampling are built around existing academic research. Categories are private equity investment life stage, investment type (e.g. buy and build, strategic distinctiveness, and operative improvement) and PMO type. Naturally, an ideal situation would be that one would have a number of cases that all present different sampling configurations.

3.4 Data collection

In the case selection phase, the main data sources were discussions with investment case managers and investment case descriptions on private equity company website. These data sources were utilized to analyze each investment case and their suitability for the purpose of this study. The purpose of this initial screening was to obtain a comprehensive set of potential cases. In addition, screening was followed by a discussion with PE company's Head of PMO to ensure that both case teams and case companies were willing to participate in the study.

Multiple case study typically combines data collection methods, such as interviews, questionnaires and observations. As explained by (Eisenhardt (1989), triangulation enabled by “multiple data collection methods provides stronger substantiation of constructs and hypotheses”. Hence, this study utilizes two primary data sources supported by other, secondary data sources. Case study methods also allows adding new data collection methods should they arise mid-study as the purpose of a case study is to understand each individual case as much in depth as possible. Eisenhardt (1989) calls the method “controlled opportunism.”

One main data source of this study are interviews with CEOs and COOs of case companies and investment managers. In total, I conducted 10 semi-structured interviews in six organizations and one interview lasted on average approximately 75 minutes. ***Table 5*** below summarizes conducted interviews in each case company.

Table 5: Conducted interviews and written case material

Case3	Internal	PE investment company	Written case material
A1	COO	Investment Case Manager	Program set-up material
A2	COO	Investment Case Manager	
B	CEO, PMO	Investment Case Manager	PMO initiation plan, PMO progress report
C	CEO, Group Controller		PMO initiation plan, Steering review material
D1		Investment Case Manager	Program set-up material
D2		Investment Case Manager	Program initiation plan, Project plan
E	Deputy CEO		N/A
F	COO		N/A
PE investor	Head of PMO		N/A

Semi-structured or themed interview is an interview method where the interviewer has pre-set question themes to ensure that the same information is obtained from respondents, yet the interviewer can occasionally ask some spontaneous ones (Hirsjärvi and Hurme, 2001). As multiple case study treats every case as a distinctive experiment, semi-structured interview allows the interviewer to pursue some questions at greater length and width than others thus extracting relevant, case-specific data. Semi-structured interviews allow the interviewer to keep the situation informal, yet contextual, systematic, and comprehensive. It also delimits the number of issues taken up by the interviewer but might leave some logical gaps in the data collected (Hirsjärvi and Hurme, 2001). Interview structure is outlined in Appendix B.

Furthermore, interview data is supported and complemented by other, written data sources including program initiation reports, steering review reports, program management office reports and program roadmaps. These data sources were utilized to acquire preliminary information about circumstances of program initiation phase and more detailed information about the programs run in the case companies accounting for e.g. their structure, governance, contents, processes, and metrics. They also provided rigorous quantitative data on program details in terms of number of initiatives, work streams, program objectives, and KPIs. In total, these reports counted for 124 power point pages. ***Table 5*** summarizes the data sources in each case. In addition to interview data and case company material, secondary data sources were utilized to acquire relevant information on case companies. Company web pages and LinkedIn provided supporting information regarding case company industry and market information as well as educational background and prior work experience of head of PMOs, CEOs and COOs.

3.5 Data analysis

The objective of this thesis is to develop theoretically meaningful insights on the use of PMOs as a value creation method in leveraged buyout companies. According to Dubois and Gadde (2002), deductive approach focuses on generating propositions from existing theories and making them testable. Thus, deductive approach is best suited for the purpose of this study in contrast to inductive approach which focuses on systematically developing rigorous new theory from research data (Glaser and Strauss, 1967, cited in Eisenhardt, 1989).

In order to analyze the data collected both from the interviews and drawn from the written case material, an abductive approach, systematic combining, was used as presented by Dubois and Gadde (Dubois and Gadde, 2002, 2014)Systematic combining was used both for within- and cross case analyses (Eisenhardt, 1989). Systematic combining serves best when the process of evolving theoretical framework, empirical fieldwork and case analysis is simultaneous. Moreover, systematic combining focuses on building more “refinement of existing theories than on inventing new ones” (Dubois and Gadde, 2002). As discussed earlier, current perspective on the use of PMOs as a value creation mechanism is lacking. To summarize, this thesis uses deductive approach and systematic combining in analyzing the empirical data.

4 RESULTS

In this chapter I will present the key results of this study. First, I will summarize the circumstances under which portfolio companies have decided to initiate a PMO and the argumentation behind the decision. Second, I will discuss the situational factors and the argumentation behind *not* instituting a PMO to create value. Furthermore, I will outline the agenda of each PMO and how they seek to contribute to value creation. In the second part of this chapter, I will explore experiences driven from each case and discuss the success of the PMO in each case company.

The main finding of this chapter is that by recognizing the right circumstances PE investors can create value using applicable PMO frameworks in their portfolio companies. By considering the life stage, project management maturity of the portfolio company, and applicable value creation mechanisms, PE investors can identify adequate objectives and content for a value creation program, and successfully launch a PMO to ensure the execution of the program. Therefore, PE investors can contribute to the growth and the value creation activities in their portfolio companies through PMO.

4.1 Value creation windows of case companies

In addition to traditional value creation through mechanisms such as. financial engineering and financial support (see e.g. Järvenpää 2014), PE investors take a more and more active role in the development of their portfolio companies and thus, aim to create superior value. Development areas are mostly *identified* prior to the acquisition or during the holding period, but development activities are c*ompleted* during holding period. The value is partly captured during holding period and ultimately at exit. Based on the data, distinct value creation windows and their objectives are identified and summarized in ***Figure 4*** relative to where they stand in their PE investment portfolio company lifecycle.

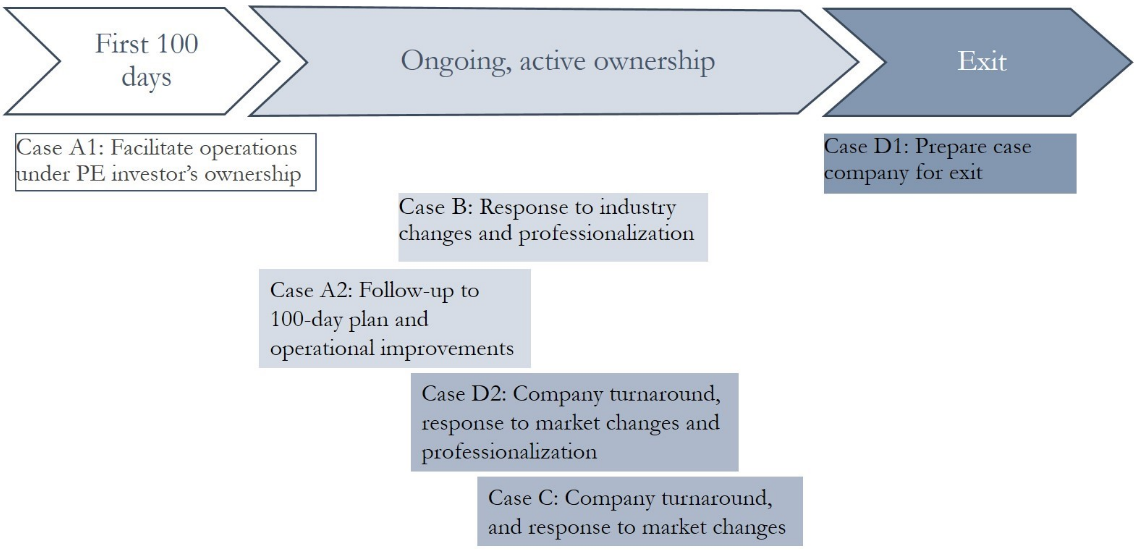


Figure 4: Value creation programs in the case sample

Cases A1 and A2 are strongly interlinked. The first one is a typical 100-day plan initiated right after the acquisition whereas the latter one has a more long-term objective and concentrates rather on qualitative than practical matters. Case B is an operational development program targeted to enable better strategy execution whereas case C is a turnaround with the objective of shifting the companies course and improve its poor financial performance. Cases D1 and D2 are also interlinked: case D1 prepared the company for divestment whereas case D2 had the objective of turning the company around and prime the company. The PE investor was strongly involved in cases A1, C, D1 and D2 whereas cases A2 and B were initiated more on case companies own endeavors. Thus, the three above-presented value creation windows are present in the case sample. As the ***Figure 4*** depicts, two case companies have had a PMO in two distinct value creation windows with a significantly different objective and content. Hence, it would be unreasonable to argue that a PE investment company can create value using a PMO only in one specific situation, such as after completing vendor due diligence analysis to prepare the portfolio company for exit.

Yet, it seems that from a value creation perspective it is also important to identify the mission and the explicit objective for the PMO prior to establishing the PMO in addition to identifying the adequate circumstances. Based on the PMO initiation reports of three cases (Cases B, C, and D) a PMO can for instance be established to facilitate professionalization of the portfolio company promoting project culture and more established project management system with relatively vaguely defined objectives. In turn, it can also execute well-structured and well-defined program to prepare the portfolio company for exit. Objectives for each PMO are also summarized in ***Figure 4*** above. Thus, initiating a PMO is not value creating itself but the value comes from the initiatives PMO drives to achieve the objectives. In conclusion, I argue that the value created by the private equity investors using PMOs depends highly on the circumstances and life stage of the portfolio company and the ability of PE investors to identify the value creation window where PMO is a suitable value creation mechanism as well as an appropriate PMO framework.

In order to examine under which circumstances PE investors created value using PMOs, it is valuable to categorize the situations and objectives presented in ***Figure 4*** in a meaningful way (Eisenhardt 1989). By analyzing the situations in which the portfolio company and the PE investor have decided to initiate a PMO, a categorization of circumstances into short-term tactical programs, long-term strategic programs and turnaround programs emerged as the most suitable framework. They differed not only in terms of the time span of the program, but also in terms of objectives and value creation mechanisms the program executes. Thus, the situations presented in ***Figure 4*** were further divided into three groups. ***Table 6*** summarizes this categorization.

Table 6: Categorization of frameworks

Short-term tactical programs	Long-term strategic programs	Turnaround
Case A1	Case A2	Case C
Case D1	Case B	Case D2

Depending on the situation in which the PMO was initiated, the life stage of the portfolio company, its project management maturity as well as industry and market dynamics, the program content varied significantly. The program or portfolio is targeted to create additional value and it must be tied to the key value drivers. Therefore, the program must be well planned to target the desired internal and external challenges.

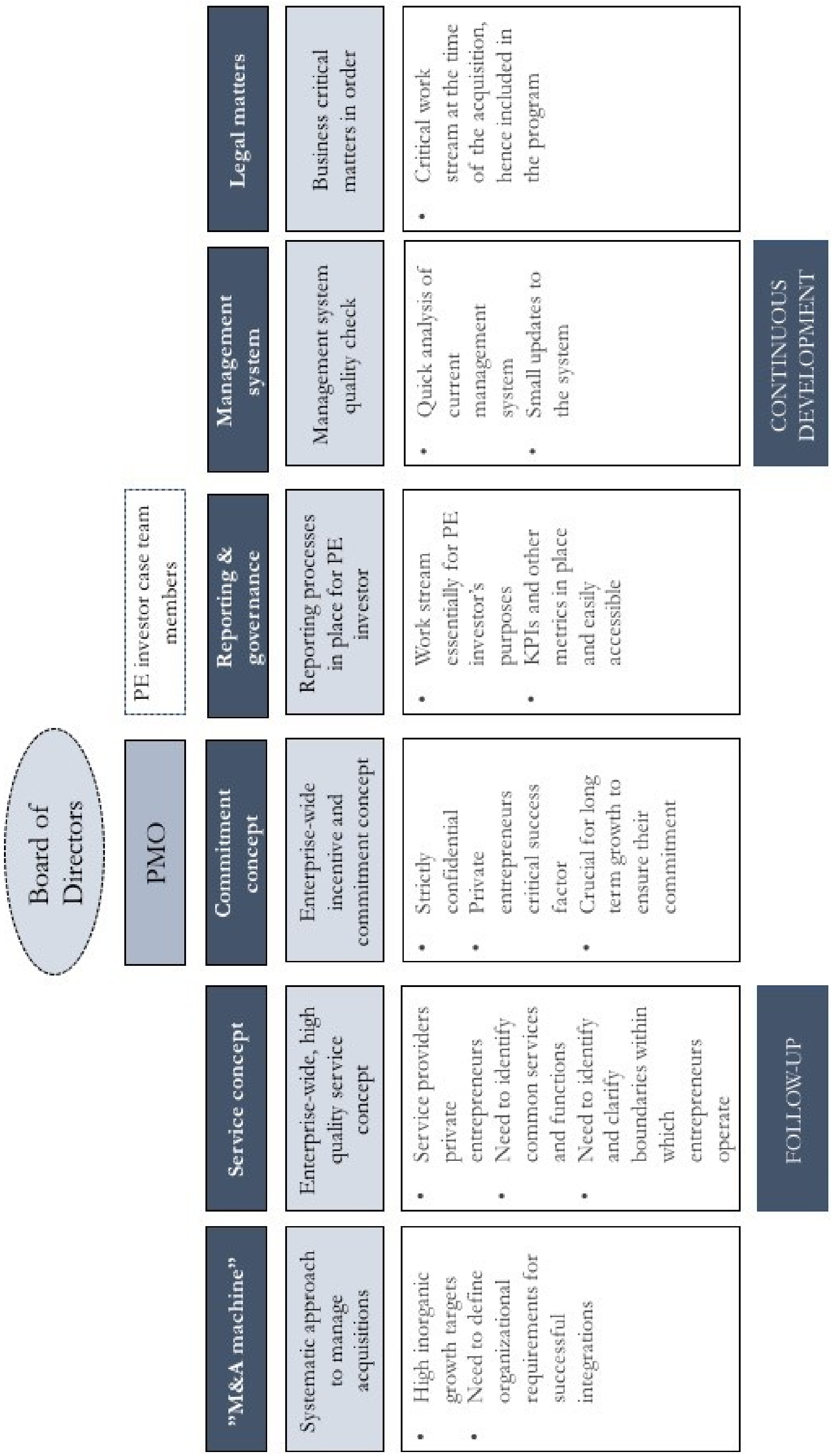
Three of the case companies engaged external consultants in the program initiation phase. Upon the recommendation of the PE investor, case company C employed external consultants to analyze current situation of the company and how they could improve their financial performance. The PE investor engaged consultants to analyze case company D's readiness for exit. And case company B worked together with consultants to analyze their current operating model and used them to provide recommendations for further development areas. Interview data suggests that when the PE investor or the portfolio company engages external consultants, a change in course has already occurred, for example KPIs or targets are not met or the portfolio company struggles in making a shift of course. Thus, it would be an oversimplification to state that a PMO is established as a direct consequence of external consultants' analysis. Instead PE investors and portfolio companies resorted to external consultants in analyzing the current situation and providing recommendations because they are objective and do not take a stand on either side. Especially in challenging turnaround situations, external consultants are commonly used to investigate the underlying factors that led to performance challenges. In addition, an objective third party neutralizes tensions and expectations between the PE investor and the portfolio company. Moreover, two case companies B and C also engaged external consultants in the program initiation phase to ensure rapid start and well-structured, applicable program. The interview data emphasizes that in a such situation it is crucial to ensure full ownership of the portfolio company over the program and its objectives. The circumstances and drivers behind each value creation program are analyzed in more detail later in this chapter.

4.1.1 Short-term tactical programs

4.1.1.1 100-day plan

An acquisition is often followed by a 100-day plan. According to Boston Consulting Group (2017) the plan is critical to long-term value creation and has, amongst others, the objective of facilitating the joined life of a PE company and the portfolio company. The plan outlines the most urgent value creation steps that can be taken immediately after the acquisition. Namely, the 100-day plan consists of the first months under the new ownership, and hence the plan is very limited in time and in scope. In case A1 the private equity investor and portfolio company built a PMO to plan and execute the 100-day plan. ***Figure 5*** outlines the plan in case A1, its structure, modules and governance.

Figure 5: Case A1 value creation program



The objective of the plan was to *"put critical matters in order for the common journey to start, but it did not include any strategically significant projects"* (COO of case company A). The 100-day plan did not focus on creating competitive edge in the long run. The program was planned and initiated quickly and consisted of sprint projects with a duration of maximum four months. As the COO of the respective case company summarizes *"it was just a little facelift"* and did not take a stand on the case company's strategy nor on the long-term business plan. The "M&A machine" -work stream was directly linked to the buy and build -investment type. The work streams encompassing management system, reporting and governance and legal matters are typical focus areas for a 100-day plan. They can be described as administrative work streams and had the objective of lowering agency costs and improving reporting and monitoring. Service concept development had a more long-term objective whereas commitment concept stemmed directly from the organization structure the company embraces.

4.1.1.2 Exit plan

A vendor due diligence analysis is conducted by external consultants before the PE investor initiates the exit process. The objective is to facilitate the exit process both for the PE investment company and for the buyer. The analysis often results in several development areas and recommendations that the portfolio company should undertake before exiting the portfolio company in order to maximize profits from the transaction. As the PE investor is ready to exit the portfolio company, the program resulting from the analysis is often very limited in time and well-structured. Case D1 represented the above-described circumstances and the program is outlined in ***Figure 6*** below.

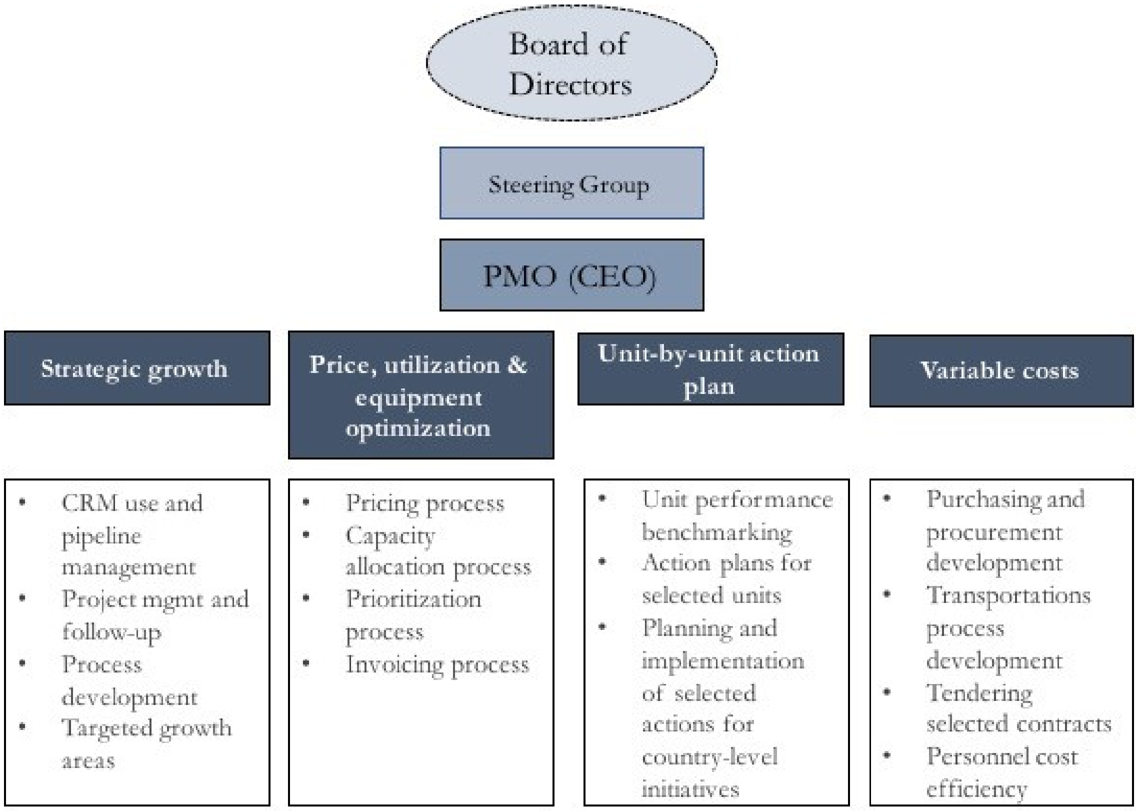


Figure 6: Case D1 value creation program

In case D1, the strategic growth -work stream had the objective of ensuring strategically aligned growth projects and ensure proper pipeline management to ensure future projects. It was the most essential work stream in terms of additional value creation and value capture at exit. Whereas the three other work streams concentrate on streamlining cost structure - a typical activity performed by the PE investors prior to exit (investment case representative D). In addition, the program targeted poorly performing business units to prepare the company for divestment and to maximize returns.

4.1.2 Operational development programs

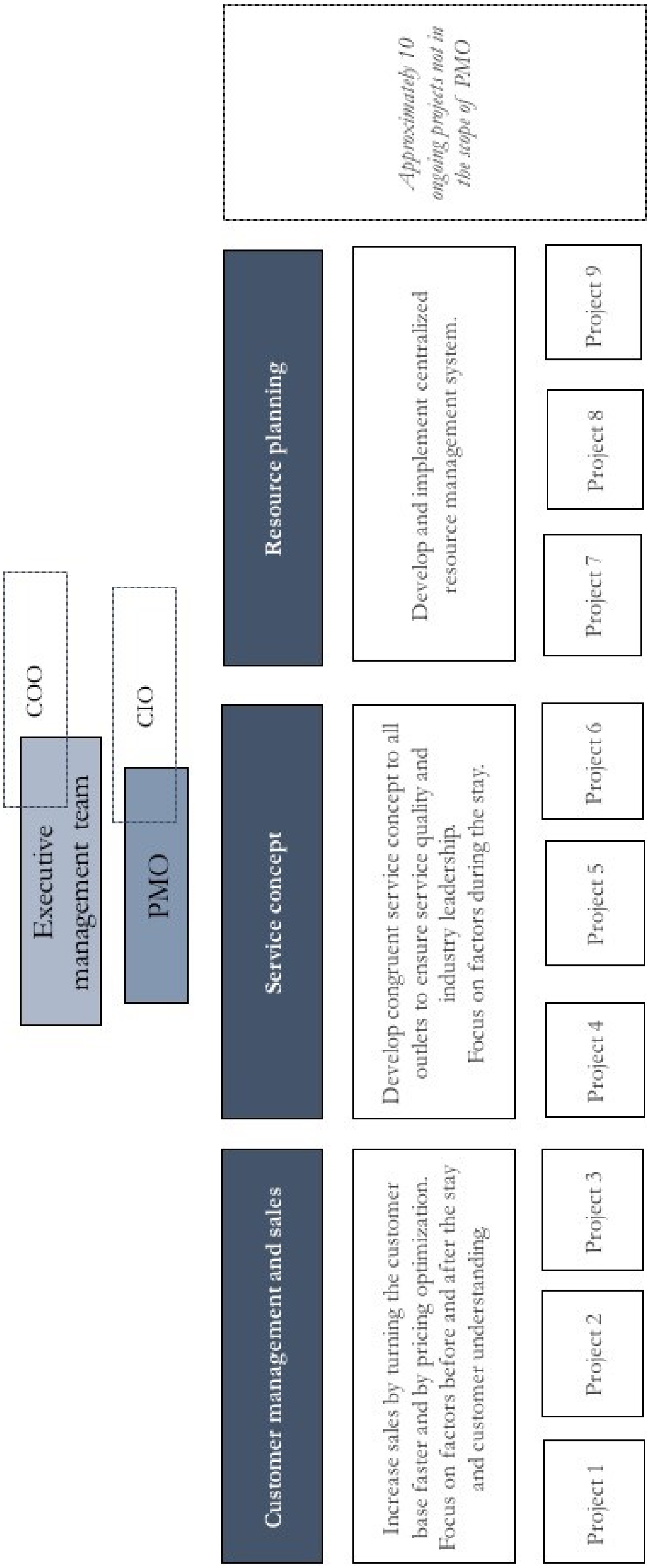
During due diligence analysis completed prior to the investment decision (EVCA, 2007) PE investors identify operational improvement areas and key value drivers to guide value creation during holding period. Further development areas can also be discovered during the 100-day plan and even after that whilst pursuing other development initiatives. Case A2 represented a typical development program encompassing also work streams that rooted in the 100-day plan.

An operational development program is characterized by a longer time span and may have a less restricted scope than a 100-day plan. The program A2 consisted of projects with a mid- or long-term objectives and had a strategic impact in contrast to 100-day plan. The objective of such program is in general

i) to complete unfinished work streams and projects from the 100-day plan and ensure their successful transfer to the line organization, and
ii) to pursue operational development areas identified prior to the acquisition or during the 100-day plan, and
iii) to identify and execute further work streams based on updated or altered strategic plan.

Directly after the 100-day plan several projects were planned, launched and pursued simultaneously since the portfolio included many novel projects which the case company A had no prior experience of. According to the company COO, their success was relatively unsure, and the COO admits *"we didn't know if we were going to succeed in any of the projects"*. After having initiated a number of projects, case company A constructed a portfolio of projects, and projects were grouped under three work streams. The final program structure is summarized in ***Figure** 7*. The customer management and sales -work stream and service concept -work stream stemmed directly from the 100-day plan and focused on increasing sales while ensuring service quality. These work streams were directly linked to strategy execution: the company had the objective of remaining industry leader also in five years' time and ensuring their position as a high-quality service provider required investing in and developing the service process as well as customer management. The third works stream, resource planning, in turn focused on more efficient use of resources. In addition, the company had a number of projects that did not directly subordinate to strategy and were not in scope of the PMO.

Figure 7: Case A2 value creation program



Case company B was facing subtle industry disruption both in terms of customer segments and sales channels. Their operating model was challenged by digitalization and new players in the industry. Thus, the company decided to update their organization and management structure, and invest in building new capabilities in order to ensure execution of their strategy. The company assessed that their strategy was still relevant and remained unchanged but it required building new competences and capabilities as well as altering their operations to best respond to changing industry dynamics. Hence the company had initiated several projects, but lacked a portfolio-level view on their project efforts. Majority of projects were behind schedule, resourcing was insufficient and projects were not meeting their targets. Unclear and extensive project universe brought the CEO and the board to initiate a project management office and recruit a new resource to coordinate the portfolio. Due to significantly different internal and external circumstances in which the program at case company B was initiated, the program structure, work streams and governance appear very different from case A2 as ***Figure 8*** demonstrates. The digital development and customer communication -work streams focused strictly on developing new competences and capabilities in order to better acquire, serve and retain customers whereas operational excellence and data -work streams focused on improving operational efficiency and use of data. Better use of data had also the objective of promoting monitoring, reporting and more professionalized decision-making.

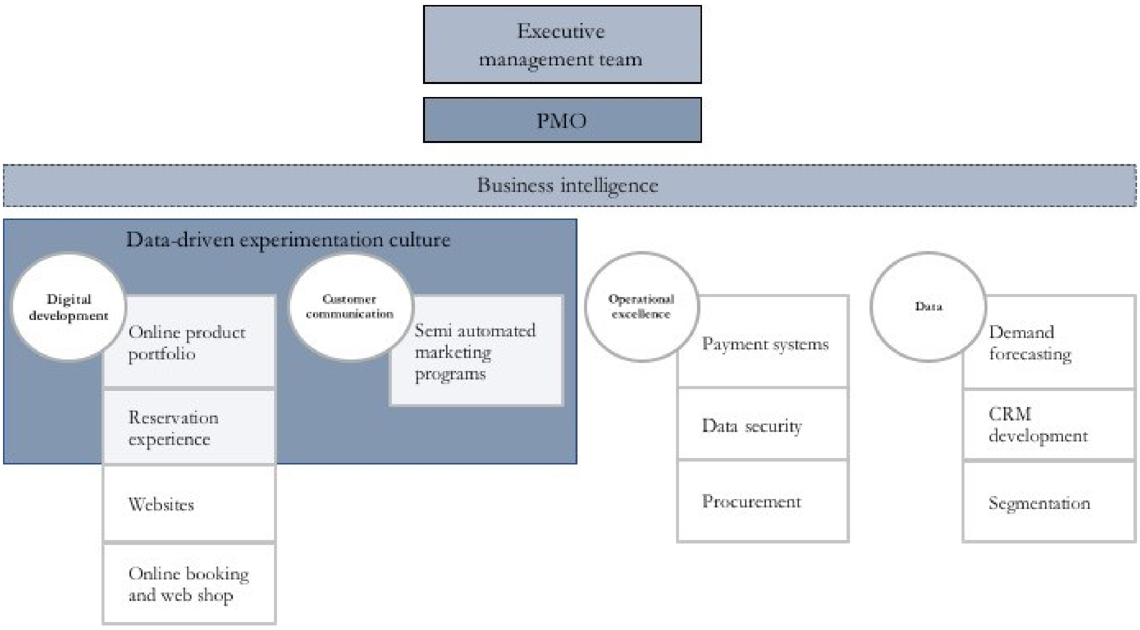


Figure 8: Case B value creation program

Both operational development programs (cases A2 and B) represented situations where the program was developed as a result of prioritizing, resourcing and restructuring activities. The companies have scoped down from a very large, unstructured and complex project universe to a more structured and better-defined program with clear targets and objectives with the help of a program manager. According to the PMO of case company B and the COO of case company A, the process has been painful and challenging.

4.1.3 Turnaround programs

PE investors invest typically in companies operating in mature and stabilized but relatively cash-rich industries. However, industry and market dynamics are susceptible to change. These changes require portfolio companies to act and PE investors to support them in order to ensure additional value creation during holding period. Two cases represented programs initiated due to significant changes in their operating environment in contrast to case company B which was facing similar challenges, too, but to less critical extent. Case company C operated in an industry that was facing a "double dip" situation where margins were decreasing and raw material prices increasing – just after having survived the consequences of the financial crisis of 2008. The industry is characterized by low margins and short lead time. The process flow is crucial to success and raw material prices an essential factor affecting cost of goods sold. Consequently, it was both board and management team's mutual decision to first engage external consultants to analyze the current situation and upon their recommendation initiate a program targeted to improve Gross Operating Profit and ultimately EBITDA. A consulting company was involved in the analysis and program initiation phase. The consulting company constructed an extensive one year program for the case company consisting of six work streams and recommended a PMO to manage the program. The program is outlined in ***Figure 9*** below. The objective of the program was to make a significant change in the viability of the business. Thus, majority of the projects involved cost cutting and cost optimization activities. Also, new products and other ventures were explored in order to secure sales and viable product pipeline.

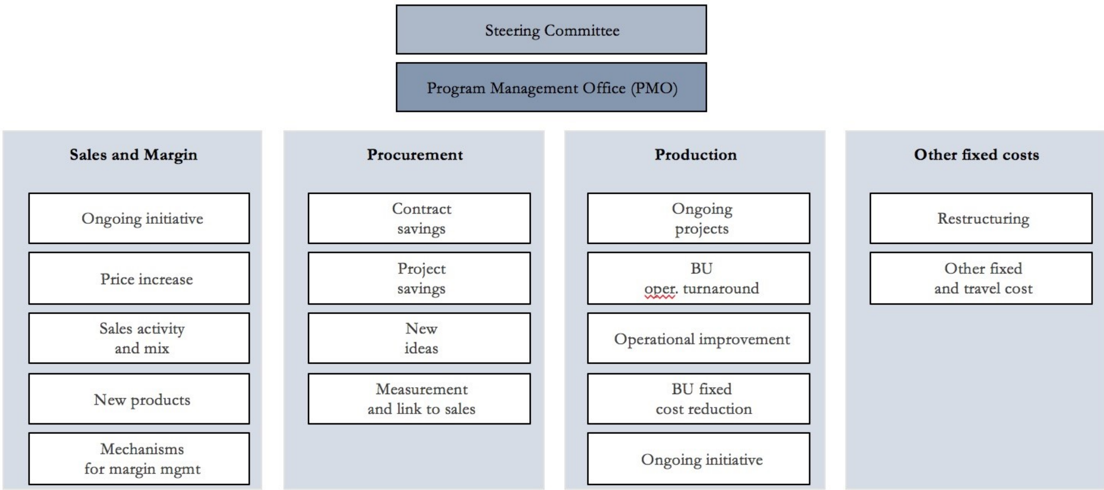
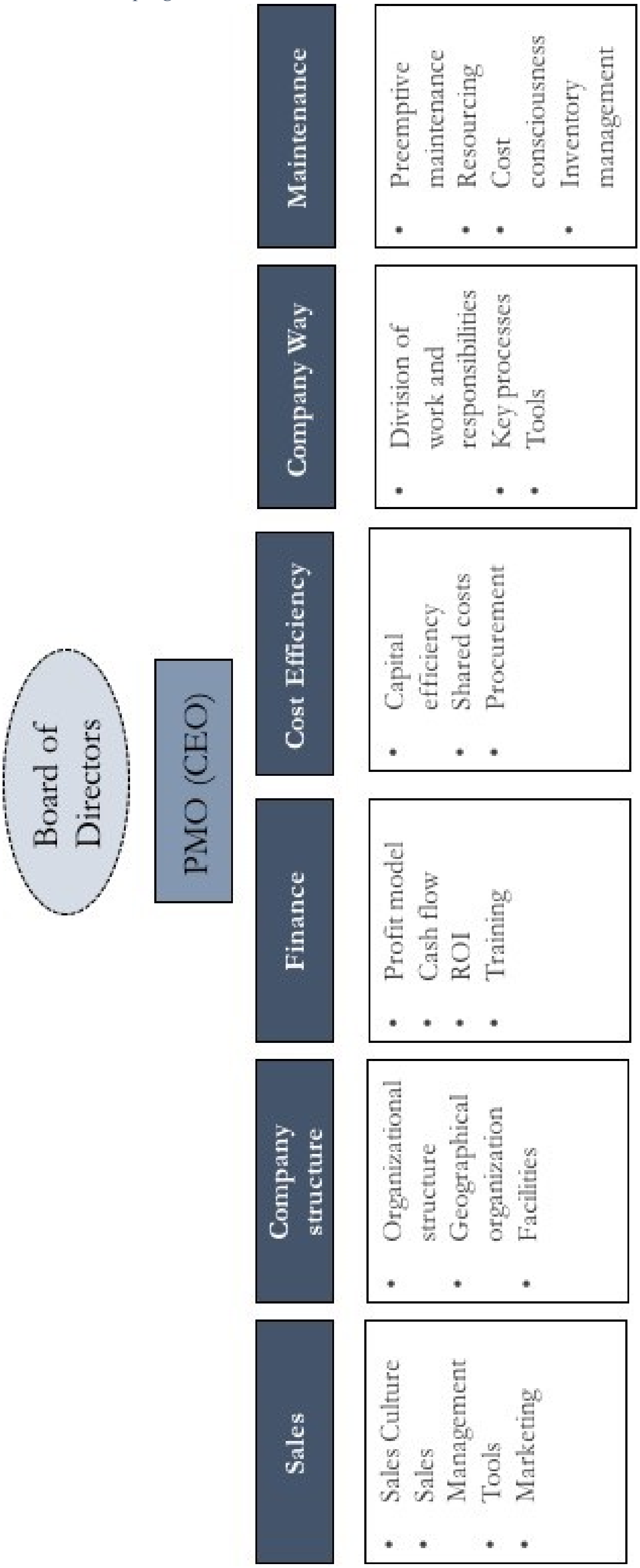


Figure 9: Case C value creation program

The case company D was also facing crucial challenges in achieving the objectives of the program targeted to prepare the company for exit. The PE investor had already conducted an initial vendor due diligence analysis, initiated a program based on the analysis and pursued the program for nine months. After having run the program for only two months, the program steering board witnessed program targets un-met. The investment case manager remarked "*the business went to a totally different direction than first presumed.*" In addition, the case representative acknowledged that "*there was not enough experience nor project management capabilities and CEO's time went to fixing other things rather than managing the program*." Due to these challenges, the PE investor decided to alter the program initially targeted to prepare the company for exit and initiate a second program managed by the newly recruited CEO. The already initiated program and analysis conducted by external consultants were emphasized in recruiting the new CEO. The second program no longer had the objective of preparing the portfolio company for exit, but was "*targeted to shake structures properly and put things in order*" (investment case manager, case company D). The new CEO initiated a number of projects immediately and conducted his own analysis followed by the launch of the new turnaround program D2. In addition to the already ongoing projects, the CEO incorporated projects that were targeted to "*put the company back on track*" through operational improvements, improved efficiency and clarified strategy execution in the program. Compared to case D1, the turnaround program D2 was more comprehensive as ***Figure 10*** below demonstrates.

Figure 10: Case D2 value creation program



4.1.4 Unstructured development project portfolios

Not all portfolio companies establish a project management office to manage a portfolio of development initiatives. The interview data comprises also two interviews with portfolio company representatives that currently do not run a PMO. This chapter explores differences between portfolio companies that run a PMO and companies that don't in order to better understand the circumstances and internal factors that don't encourage in initiating PMO. These dimensions are summarized in ***Table 7*** below and discussed further in this chapter.

Table 7: Comparison of case company dimensions

Case	Investment type	Size of corporate headquarter	Management structure
A	Buy-and-build	50	Centralized management
B	Buy-and-build, operational development	50	Centralized management, **SBUs managed by general managers**
C	Operational development	N/A	Decentralized management
D	Operational development	N/A	Two separate country organizations, **country leaders**
E	Buy-and-build	10-15	Decentralized management, **SBUs managed by workshop managers**
F	Strategic distinctiveness	5	Decentralized management, **SBUs managed by managing directors**

Based on case company data and interview data, the investment type does not alone justify the lack of PMO: case companies A, B, and E were "buy and build" investment cases and case companies A and B run a PMO as opposed to case company E. Case company A even included in their 100-day plan a work stream that was strictly targeted to facilitate and structure the acquisition process. Portfolio company E's growth strategy was based on acquiring and integrating additional units, previously independent companies, to the platform company. Deputy CEO of case company E emphasizes multiple factors, such as brand perspective and IT systems, and their importance in the integration process, but admits that for instance renovation needs are assessed case by case due to their cost sensitivity. According to the Deputy CEO, their integration process was not very structured compared to case company A. Interview data suggests that depending on the pace, complexity and size of the acquisition, a structured and well-defined acquisition and integration process is recommended notably when the level of collaboration between business units is high. As company representative from case company F summarized "*onboarding new business units consists of integrating financial processes and systems, offering and organization, PR, communication and recruiting processes just to name a few*." In other words, acquisition and integration process is always risky and calls for a systematic framework.

One factor that differentiated case companies with a PMO from the other interviewed companies was the size of the 'headquarter' incorporating common support functions. The headquarter of case company E consisted only of 10 to 15 people, and case company F's only of five people compared to for example case company B with a group headquarter of approximately 50 people. What enabled case companies E and F to have a decentralized management system and a strong autonomy at each business unit were workshop managers at case company E and managing directors at case company F. However, business units of case company B are managed by general managers. Small headquarter enables portfolio companies to manage development initiatives tightly whereas data suggests that there is a need for group level controlling structure with regard to larger headquarters.

In addition to the size of the corporate headquarter, portfolio companies constitute different organizational structures. Case company F was a network of individual agencies, whereas case company E was essentially a chain of workshops in contrast to case companies A and B which were also chain of individual business units but with relatively strong, centralized management. However, from strictly administrative perspective portfolio companies F and B were both holding companies. Even though a holding company, case company F focused heavily on stronger integration of existing business units rather than development initiatives or acquitting new business units. To emphasize the importance of strongly integrated operations, the COO of case company F spoke of a "family". According to him, their critical success factor was to make sure all the managing directors of each unit were "*fully on board and aware of the network strategy*" and "*fully understand the width and depth of the network*". All interviewees acknowledged that their companies were strongly integrated in terms of common operating model, IT-systems, KPIs as well as clients.

With a smaller headquarter, the number of development initiatives was also significantly smaller. In case company E, the only group wide development initiative was IT-system integration, comprising of e.g. enterprise resource planning (ERP) system. The COO of portfolio company F mentioned only two company-wide ongoing development initiatives: common customer relationship management system and an internship program. In addition to the sheer size of the corporate headquarter, the task they perform affect the number of development initiatives coordinated by the headquarter.

PMO increases also the level of professionalism in the portfolio company by implementing well-defined, routine structures to plan, monitor and execute projects. Especially in portfolio companies where the level of managerial skills is low, PMO can create additional value through professionalization. Case companies B, C and D embraced it by implementing a series of processes and routines to follow in order to increase the level of professionalism in their portfolio companies. Operating in heavy vehicle and mechanical industry, portfolio company E may face challenges in project and portfolio management should the number and complexity of projects increase. On the other hand, portfolio company F's business was project-based and the staff had background in fields such as industrial engineering and computer science, thus having a higher level of managerial capabilities and project management competences.

4.1.5 Conclusion of drivers to initiate a PMO

To conclude with, PE investors and their portfolio companies have initiated a value creation program under three distinct circumstances. First, the objective of short-term, more tactical programs was to prepare the portfolio company for and facilitate the next phase in the PE investment lifecycle. It may be for instance ongoing active ownership or exit. The program is well-defined in terms of time and scope. Second, the portfolio companies have established a more long-term, strategic value creation programs to ensure strategy execution and achieve challenging operational and numerical objectives set by the PE investors. These operational development programs are often less structured and the program scope may even change during the program. Last, the PE investor may initiate a turnaround program to restore the company's performance and thus ensure additional value creation and capture. In general, the PE investor was most involved in the short-term programs related to acquisition or exit and in the turnaround programs due to their importance to value capture. In addition, external consultants were typically engaged in the analysis before the program initiation phase and in some cases also in the program launch.

As a conclusion, there are four key elements in assessing the suitability and need for a program management office. First, it seems that the size of the corporate headquarter steers the number of enterprise-wide development projects and consequently, the need for comprehensive controlling and supporting structure. Case company A struggled with coordinating nine enterprise-wide projects without a designated PMO whereas case company D's turnaround program consisted of 24 activities and was managed by the company CEO. Data suggests also that the size of the headquarter is proportional to the number of resources involved in development projects and variation of project personnel. Should the size of the headquarter grow, the number of projects and consequently project personnel is likely to increase resulting in need for enhanced structure and control. However, the existing literature accentuates that if the portfolio company was to undertake one, large, enterprise-wide project, it would be recommended to initiate a project management office dedicated to the specific project.

4.2 PMOs' contribution to value creation

As discussed in the previous chapter, private equity investors used PMOs in specific situations to create additional value. Previous chapter outlined specific objectives of the value creation programs, their structure and the work streams of each program in more detail to outline the external and internal factors and objectives that call for a PMO. Moreover, PMOs in each case used a set of tools and frameworks, embrace certain roles and responsivities in order to contribute to, enable and support growth. This chapter discusses PMO mechanisms used in the cases to promote the value creation.

4.2.1 Case PMO's objectives

Based on the interview data and existing academic research on PMOs, by far the most essential task of a PMO is to ensure the execution of strategic projects (see e.g. Crawford, 2011). Program management office was commonly described as the "*right arm of the CEO*" (Deputy CEO, case company E and CEO, case company C). Deputy CEO of case company E also accentuated that strategic projects should be on the agenda of the CEO hence emphasizing the importance of executive support and buy-in. Interview data and program initiation reports supported the claim.

In terms of other key activities of the PMO in leveraged buyout context, interview data is ambiguous. However, all interviewees highlighted two key activities: ensuring the execution of strategically important projects as discusses in the previous paragraph and project prioritization. In terms of business objectives, all six PMOs in the four case companies focus on increasing sales and optimizing cost structure. Case company C's program focused strictly on improving gross operating profit and EBITDA whereas turnaround program D2 and case company B's development program involved also work streams consisting of restructuring the organization and renewing their operating model. These programs had a strategic importance and they were supported by the CEO. However, the operative development program A2 was somewhat focused on enabling strategy execution but lacked an enterprise-wide strategic meaning and buy-in. In terms of professionalization, case B was the only program with professionalization as an explicit objective of the program whereas professionalization was seen as a by-product of the program in terms of other operational development and turnaround programs (cases A2 and D2).

4.2.2 Program structure

Based on program report data, a typical number of work streams was 3-5 (see ***Figures 5-10***). Still the number of projects under each work varies significantly. The number depended on company size and project maturity, project size and complexity as well dedicated resources. Case company C ran simultaneously 16 projects grouped under four work streams whereas case company A only two or three projects under three work streams. ***Table 8*** outlines program structure and size as well as focus areas of each program.

The size of the program was somewhat proportional to the strategic importance of the program. For instance, case companies C and D were forced to involve the entire company to the program in order to shift the course of the company whereas case companies A and B ran operative development programs alongside their daily operations. From operational perspective, the focus at case companies C and D was in the program as opposed to case companies A and B where it was on daily operations.

Table 8: Program structure and objectives

Case	Number of work streams	Number of projects	Type and objective
A1	6	N/A	**Facilitate** operations under PE investor's ownership
D1	4	12	Prepare case company for exit and **facilitate** the exit process
A2	3	9	Follow-up to 100-day plan and **operational development**
B	4 + 2	13	**Operational development** to respond to industry changes and **professionalization**
D2	6	24	Company **turnaround**, response to market changes and **professionalization**
C	4	16	Company **turnaround**, and response to market changes
Average	4.8	14.8	

4.2.3 PMOs and project managers

Programs and project portfolios included in the case sample had significantly different objectives as discussed in the chapter 4.2.1 and as ***Figures 5-10*** demonstrate. Based on interview data, case companies' project maturity varies considerably and they had different needs regarding for example execution support due to lower project management maturity (case company D) whereas other call for prioritizing and structuring activities due to excessive and indeterminate project portfolio (case company B). Interview data and program initiation reports (cases B, C, D1 and D2) indicate that program managers and portfolio managers had various roles and responsibilities in the case companies. Based on Desouza and Evaristo's (2006) and Project Management Institute's (2013a) classification, their roles represented different PMO architypes. Program manager profiles are summarized in ***Table 10*** below.

Table 9: PMO profiles in case companies

Program	PMO role and position *(Unger, Gemünden and Aubry, 2012)*	PMO knowledge based architype and framework *(Desouza and Evaristo, 2006; PMI, 2013b)*	PMO background	Reports to
A1	Coordinating PMO, COO	Information Manager Supporter *Project Support*	M. Sc. Strategy consulting, Sales management	Steering group and board of directors
D1	Coordinating PMO, CEO Responsible also for two work streams	Information Manager Supporter *Project Support*	M. Sc. Long experience in senior positions in raw material industry	Steering group and Board of directors
B	Coordinating, controlling, supporting PMO	Knowledge Manager Supporter *Enterprise PMO*	M.Sc. Project Management	CEO
A2	Coordinating PMO, CIO	Information Manager Supporter *Project Support*	M.Sc., construction architect Information Systems and IT-consulting	COO
C	Coordinating, controlling, supporting PMO	Knowledge Manager Coach *Enterprise PMO*	M. Sc. Strategy consulting	CEO and steering group
D2	Coordinating PMO, CEO	Knowledge Manager Supporter *Project Support*	M. Sc. Strategic Management and experience in mechanical industry	Board of directors

Interview data supports Keenan *et al.* (2013) in terms of PMO resourcing: the program or portfolio is often best managed by one person. Naming conventions varied between program managers, portfolio managers and program or portfolio management officers (PMO). The PMO was run by a portfolio company employee in all cases. In addition, the program manager was supported by investment case manager during the two short-term, tactical programs. The 100-day plan is on top of the PE investor's agenda due to its importance to long-term value creation (Boston Consulting Group, 2017) hence a member of the corresponding investment case team is likely and highly recommended to take part in the program management. On the other hand, one objective of exit program D1 was to maximize PE investor's profits and thus, it is only reasonable that the PE investor was closely involved in the program management. Two programs were managed by executive directors. Chief IT Officer (CIO) run the operational development program A2 because "*many of the projects were very system related*" (COO of case company A). However due to incompetent portfolio company personnel and very low project maturity, the PE investor looked for external PMO and project managers to manage the exit program D1 of case company D, but eventually trusted the CEO with the PMO task. Newly recruited CEO was trusted to manage the turnaround program D2 of case company D after the unsuccessful exit program D1.

A specific program manager or portfolio manager was recruited in two cases: B and C. Due to the complexity and size of the program and lack of adequate resource, both case companies decided to recruit a PMO outside the organization to oversee project activities and ensure punctual execution of the projects. However, there are both positive and negative effects in recruiting a PMO outside of the organization. On one hand, the PMO may be considered PE investor's agent in the portfolio company and consequently lack organizational trust and buy-in. On the other, a newly recruited PMO is objective and ignorant of possible tensions between the case company and the PE investor and consequently, focus only on project delivery. Based on interview data and interviewees experiences from other portfolio company PMOs (CEO of case company C and deputy CEO of case company E), the PMO should integrate to the company without losing objective and critical approach. Moreover, the CEO of case company C emphasizes that even though the PMO might be recruited only to run a program, he or she should demonstrate personal buy-in for example by learning to use essential tools and systems and showing personal interest in the project activities. Notwithstanding, interview data suggests that the portfolio companies assessed the positive effects of an externally recruited PMO to surpass the negatives ones.

4.2.3.1 PMO's legitimacy

In majority of cases the PMO reported directly to the CEO. Existing academic research recommends that the PMO should be a free agent outside of the line organization and report directly to the CEO and steering board (Keenan *et al.*, 2013). Both externally recruited PMOs operated outside the traditional line organization and directly under the CEO. In terms of the 100-day plan A1, the current COO of case company A managed the portfolio with a direct reporting line to the CEO and to the board of directors. However, the operative development program A2 was managed by the CIO who reported to the COO who in turn reported to the CEO. Thus, the program lacked direct executive support and oversight. Case company D's both programs were managed by the CEO – though the CEO was replaced after the first program D1 was discontinued. Again, project managers generally manage projects alongside their operational responsibilities. For instance, in case company A and their 100-day plan A1, each project had its own project manager who reported directly to the PMO and steering group whereas project managers at case company B and C reported to the PMO and their direct superior. Project managers came from the line organization in most cases but some projects were managed by the PMO (case A2, C and D2). To summarize, project managers reported to the PMO, who then reported to the executive management team and to the steering group or directly to the board of directors whereas projects were managed by case company employees in parallel with their operational duties.

Majority of the interviewees (representatives of case companies A, B, C and E) emphasize the fact that PMOs should have sufficient mandate to make necessary decisions fast. One interviewee (case company E) suggested that PMO's mandate should be very similar to CEO's mandate: "*Only then, PMO can contribute to value creation by managing the program and portfolio of projects.*" Deputy CEO of case company E and COO of case company A both suggest that portfolio manager should regularly attend executive management team meetings even though not necessarily taking part in the executive management team.

4.2.3.2 PMO's organizational fit

Three out of four case companies struggled in finding the suitable PMO framework and type to fit both the organization and the PMO objectives. The CEOs as the PMOs in case D had responsibility over the execution of the projects. However, the investment case manager reported that in terms of case D1 work streams directly under the CEO's responsibility performed the most poorly even though they were strategically the most important ones. Investment case manager noted "*all his/her time went to extinguishing fires rather than coordinating the development initiatives*." As a conclusion, he assessed that managing both the program and two separate country organizations was too demanding considering CEO's experience and competences. Whereas the CEO of the case company C complimented the PMO for having strong analytical skills, and compelling and relevant business expertise, but lacked commitment to the company. According to the CEO, the program was managed routinely, without questioning actions or debating over approaches. As a result, the organization started to lose respect toward the PMO after having realized there was no personal interest nor buy-in. As the CEO put it: "*others considered the PMO 'elite' with a background in top management consulting companies and that (s)he was now put among ordinary people.*" The case program A1 was managed by current Chief Operating Officer in close collaboration with an internal subject matter expert as streams 2 and 3 described in the ***Figure 5*** required strong industry expertise in the respective areas. However, the CIO as the PMO in case A2 had only a documenting and communicating role when the organization and especially their extensive project universe would have required more controlling and coordinating PMO approach (COO of case company A). As the COO states "*the PMO takes care that all the reports are completed and submitted in time. Basically, he only makes sure that the process works*." Consequently, the PMO had no responsibility over project deliverables.

In terms of case company B's operative development program and case company D's turnaround program D2, the PMO took a more supporting role due to lack of structure and project management processes. On the other hand, in terms of roles and responsibilities PMOs in both short-term, tactical programs adopted a traditional PMO framework of goal splitting (Unger, Gemünden and Aubry, 2012) as discussed earlier. The investment case manager was also tightly involved in these organizational task force units.

4.2.4 Focus on prioritization and resourcing

PE investment portfolio companies must constantly balance between the challenging demands of the PE investors and their limited resources. High leverage forces portfolio companies to allocate scarce resources where they best contribute to value creation. Due to preordained resource limitations, all interviewees accentuate the importance of prioritization.

Two case companies reported challenges in their review and prioritization process. COO of case company A admitted that their prioritization process does not work resulting in too many, simultaneously ongoing projects with insufficient resources and overlapping interests. Hence, the quality of the project outcomes deteriorates. At case company A, the PMO focused only on coordinating strategic projects, but operational projects lacked oversight. Consequently, the company lacked portfolio-level management, comprising both strategic and operational projects, and therefore, suffered from losing project focus, which in turn hindered value creation. The PMO of case company B reported that through the PMO was responsible for building a prioritization framework, the mindset of project managers and executives still had to be changed in order for the framework to work.

Two case company representatives (case companies A and B) disclose that their companies had too many ongoing projects. The case company A has over 20 ongoing projects nine of which are strategic projects creating competitive advantage. COO of the respective case company stated that they have made decisions at executive level of not pursuing certain projects but they don't have sufficient control over simultaneous project activities. Project one-pagers and project plans are commonly altered so that projects fit the portfolio and can be pursued. The COO states "*The risk of doing too much at the same time has already realized"* (case A2). As a result, their prioritization process did not work.

Project managers and project sponsors wanted to pursue their own projects, and were not ready to "*kill their darlings*" (COO, case company A). This phenomenon clearly demonstrates the need of enterprise-level PMO.

Moreover, at case company B, the PMO was tasked with creating a prioritization framework to ensure the execution of strategically meaningful projects. In contrast, at cases C and D1 the program consisted of predefined projects and no advanced prioritization framework was needed. In case company A's operative development program A2, the responsibility over prioritization effort was transferred to work stream leaders. In addition to prioritization framework, both case companies B and C had implemented a "gate theory": project progress was monitored against preordained milestones and targets. If the targets were not met, the project would be suspect to re-evaluation and possibly discontinued.

The interview data and the program progress reports (cases B and C) suggest that in PE investment cases project management should focus on assessing whether the projects meet their targets and contribute to overall business objectives. Existing academic research (Desouza and Evaristo, 2006; Cooke-Davies, Crawford and Lechler, 2009) supports the case representative from case company A who stated that budget and resourcing are only secondary matters if business objectives are not met. He also noted that business case analysis is only relevant in the project planning phase when analyzing how the project would contribute to business objectives and targets. Business case thus becomes a guiding principle in project prioritization: in deciding whether to pursue a proposed initiative. The interview data indicates that without business case analysis, portfolio companies often lack understanding of the direct variables that affect the key value drivers, and hence pursue projects that do not contribute to the strategy or operational development.

To conclude, on of PMO's key objectives is to ensure use of a simple and easily adoptable project prioritization framework and to engage in continuous evaluation of project progress and deliverables. However, two companies were pursuing a disproportionate number of operational projects, not leaving enough capacity to engage in strategic projects creating additional value. One company had started structuring their project universe by recruiting a PMO and establishing project prioritization framework, whereas the other didn't require an enterprise level PMO despite the obvious negative effects due to the lacking one.

4.2.4.1 Project classification

Based on the case data, both the interview data and the written material provided by case companies (project initiation reports of case B, C, D2), projects classification followedM a simple pattern and is not extremely sophisticated, since it would defeat the purpose of helping the case companies to prioritize their projects and allocate resources based on the projects' importance and urgency.

Two case companies (case companies A and B) have categorized their projects into three distinct groups. These groups are

a) **Strategic projects** that create competitive edge. They form larger programs that are followed at executive and owner level – in other words, they are on the agenda of the executive management team and board of directors.
b) **Operational projects** that improve daily operations or are operational "*must have*" projects, but do not create competitive advantage. These projects are often monitored at business unit level.
c) **"C-class" projects** that consists of "*nice to have*" projects and are only pursued should there be available resources.

PMO should include also operational projects in the project portfolio and take them into consideration in portfolio management to ensure sufficient resourcing and balanced portfolio in terms project variables, such as project size and risk. In contrast, so-called '*C-class*' projects should seldom be carried out under PE investor ownership due to scarce resources (COO of case company A and CEO of case company B). However, COO of case company A notes that many projects persistently pushed forward by senior managers often are '*C-class*' projects. For this reason, PMO's objective view on prioritization and categorization is essential for the portfolio company to pursue projects creating additional value and competitive advantage. Compared to case A2 and B's categorization, case C and both of case company D's programs consisted only strategic projects and thus, no categorization framework was required. To summarize, categorization framework does not only help the portfolio company in prioritizing projects, but also in balancing the portfolio.

In addition, case company A has separated procurement and supplier related projects from strategic projects whereas case companies B and C have included procurement either as a work stream (see ***Figure 9***) or included it in the operational excellency –work stream (see ***Figure 8***) since more structured and systematic procurement will create competitive advantage through lower cost of goods sold

4.2.4.2 Resourcing

Available resources affect also prioritization efforts. COO of case company A accentuates "*Resourcing should be on the agenda of the top management team*." According to him, *"portfolio management in its entirety should be higher on executive management's agenda."* According to the deputy CEO of case company E, PMO's role is critical in evaluating resourcing. Without the PMO as a center of project related information and as an internal consulting organization, project managers typically are highly optimistic regarding required resources. Deputy CEO of case company E stated that "*man hours*" are most often underestimated, and consequently projects will not be delivered on time due to insufficient resourcing. Case company B's PMO, too, reported that resources are limited and often the factor behind the decision of not going forward with a certain project. Therefore, the company must have an overview of available project resources compared to operational workload. PMO has been tasked with maintaining such an overview at case company B.

4.2.5 Monitoring and reporting

In addition to improved prioritization and resourcing, PMO also contributed to increased transparency and better reporting and monitoring. PE investors create value by implementing more structured and sophisticated reporting processes, and focus on leading by numbers (Berg and Gottschalg, 2004; Järvenpää, 2014). The interview data indicates that PE investors should require portfolio level management, reporting and monitoring on project efforts.

Structured, rigorous monitoring was built on key performance indicators, KPIs. To emphasize the importance of monitoring, case company A's 100-day plan A1 included one work stream strictly dedicated to harmonizing KPIs and making them visible and easily accessible (see ***Figure 5***). From PMO's perspective project progress and success should be measured with easily accessible metrics. All interviewees as well as earlier research strongly recommend making KPIs visible to all taking part in the program. Program data suggests no clear number of KPIs to follow: case company C had five financial KPIs as well as five operational KPIs whereas case company B followed only six KPIs altogether. However, the program KPIs should be tightly linked to value creation drivers. Hence, majority of PMOs (case A2, B, C and D2) followed also operational KPIs in addition to project-related KPIs.

Even though not currently running a PMO, deputy CEO of case company E mentioned that they implement same operational KPIs for every acquired workshop since day one. Strong focus on KPIs and structured reporting and monitoring clearly demonstrates PE investor's influence on daily operations. In addition to well-defined KPIs, PMO also necessitates clear, demanding yet achievable targets and rigorous follow-up which is often lacking without PMO (Deputy CEO of case company E, CEO of case company B). Thus, a PMO may be considered a method to implement systematic KPIs, monitoring and reporting processes first, within the program and second, at organizational level. The CEO of case company C discussed that many structural mechanisms of the turnaround program, including rigorous monitoring, became routines adopted by the organization during the program. Thus, PMO promoted administrative management in the portfolio company trough project management system.

In addition to creating structure with clearly defined KPIs and ambitious program and project targets, communicating progress is equally important (see e.g. Boppel, 2013; Keenan *et al.*, 2013). COO of case company A, deputy CEO of case company E and PMO of case company B recommended a monthly or quarterly portfolio review to support general board reporting to promote communication and transparency between the executive management team and the board. Moreover, a steering group is also highly recommended in the interview data. PMO and project managers should report progress to steering group in terms of schedule, budget and resources, who then addresses challenges and other noteworthy issues should they arise. Steering group's task is also to support the PMO. Furthermore, program and project progress should be reviewed systematically in executive meetings. All interviewees stress that systematic reporting and program review on organization and board level correlates directly with success both on program and project level.

PMO should also be the key communicator across the organization and make program documents, such as one-pagers, available to everyone in the organization (Deputy CEO, mmm). Three case companies B, C and D reported having established dedicated forums to follow program and work stream progress and promote communication across organizational units. Case company D founded three forums, two of which continue operating after the program closure: Margin management council met once a quarter, pricing "*War room*" once a month and new product "Launch room" once every two months. Case company B's Digitalization forum met every month whereas they established a short, weekly meetings to follow the progress of small experimentations targeted to better customer communication, understanding and marketing. In addition, an extended executive management team met once a month to monitor and discuss building data-driven culture, a theme embedded and encompassing all work streams as a guiding principle (see ***Figure 8***). Case company D, too, had weekly calls to follow the progress of their turnaround program D2. Each work stream leader was responsible for gathering project progress data before the call and discuss the overall program progress. Compared to literature review, the role of communication and promoting transparency is less present in the interviews conducted with the case company representatives. One possible explanation is the fact that all interviewees either were running the PMO and thus regularly provided with project progress information or they belonged to the executive management team and thus gained access to program related information through their position. Therefore, the interviewees weren't best placed to assess the need and level of project related information at operational level.

4.2.6 Professionalization and building new capabilities

As discussed before, project management maturity levels vary significantly between case organizations. The interviewees observed (case companies B and D) that it was at a remarkably low level due to two distinct reasons. First, their main business is not project-driven (case companies B and C) and hence no project management processes have emerged. Second, managers and executives are appointed project managers with strong subject-matter expertise but without necessary experience in project management (case companies A, B and D). Their educational and professional backgrounds may be at fields non-related to project management or management in general. Hence, PE investors can create value by professionalizing project activities by building management and especially project management competences and capabilities in the organization.

Company representatives (case companies A and B and investment case manager D) reported challenges in project planning phase in terms of drafting the project plan, road map, assessment of resources and as well as scheduling and budgeting. Deputy CEO of case company E suggested that, when project maturity is low, projects are first planned in terms of time, functionality or content, and resources. However, as explained in chapter 4.3.4 interviewees acknowledged that required resources in FTE's are often underestimated. On that account, the PMO's supporting role in project initiation phase is crucial for project success. On the other hand, when building project management culture, methodology and competences, PMO's coaching role is emphasized. As part of his or her supporting role, the PMO is also responsible for ensuring that project managers have necessary capabilities and competencies (Unger, Gemünden and Aubry, 2012; Keenan *et al.*, 2013). As discussed in Chapter 4.3.2 the PE investor had acknowledged the importance of the PMO in ensuring project success and project managers' know-how, and hence considered external PMO and project managers for case D2. Due to lack of or insufficient project management competences, PMO is often the most crucial resource ensuring the execution of strategically significant projects. To conclude, he or she is also an essential resource from PE investors' point of view in long-term value creation.

4.2.6.1 PMO tools used in sample cases

Building project management competences stems from building a standard methodology of planning, executing and finishing projects. Hence, PMOs at case companies A, B and C have implemented a PMO tool box of project management methods in their portfolio companies. However, PMO tool box was in rigorous use only in case company C. The PMO at case company B had started to implement project management tools one at a time by introducing project one-pagers since the case company's project management maturity was low. According to the company COO, case company A do have a project management tool box, but it was not in active use. However, the company representative admitted that they tried to follow some standard project management procedures but did not always "*go by the book*" because the organization was small and wished to stay agile while avoiding all unnecessary bureaucracy. Generally, the tool box consisted of one-pagers and two-pagers, project plan, weekly and monthly reports as well as program-level metrics. In addition, project progress was tracked with traffic lights (case companies B, C and D). PMO at case company also PMO maintained an extensive project listing with ongoing projects and project pipeline – a task recommended also by the deputy CEO of case company E.

4.2.7 Conclusion of PMOs' contribution to value creation

To conclude, PMO contributes to value creation through different mechanisms. Due to private equity investment and high leverage, a number of mechanism are pronounced in the research data. First, the PMO is a visible face for the value creation program. PMO selection was accentuated in all interviews and special attention should be paid to finding the right organizational fit for the PMO. In addition, the PMO should adopt a PMO framework and role to best support the objectives of the value creation program.

Second, the PMO promotes change management through the program and ensures the execution of strategically significant projects. High leverage emphasizes the importance of prioritization and resourcing in terms of program management. The PMO is responsible for creating and maintaining a prioritization framework, and on the other hand ensuring adequate resourcing for projects creating additional value. However, for example COO of case company A names inefficient and inoperative portfolio review as their Achilles's heel which in turn translates into inefficient use of resources. Project goals are not met and consequently value creation deteriorates.

In order to drive change through a value creation program, it necessitates clear structure, monitoring and reporting, and above all, executive support. Hence, the number of work streams within the program should be limited. For example, the COO of case company A summarizes "*the portfolio has lived and changed a lot which has been a big challenge for us*" which causes dissent in the organization. To support the value creation, research data suggests that the PMO should report directly to CEO and program reviewed regularly in executive meetings. According to the interviewees executive support is one of the most crucial factors leading to program success.

5 Discussion

This chapter concludes the results of the empirical research and existing academic literature to form a synthesis based on the case studies supported by previous theories and existing academic research. Moreover, the reliability and validity of the results and the emerging framework will be discussed. Finally, I will make recommendations for further research.

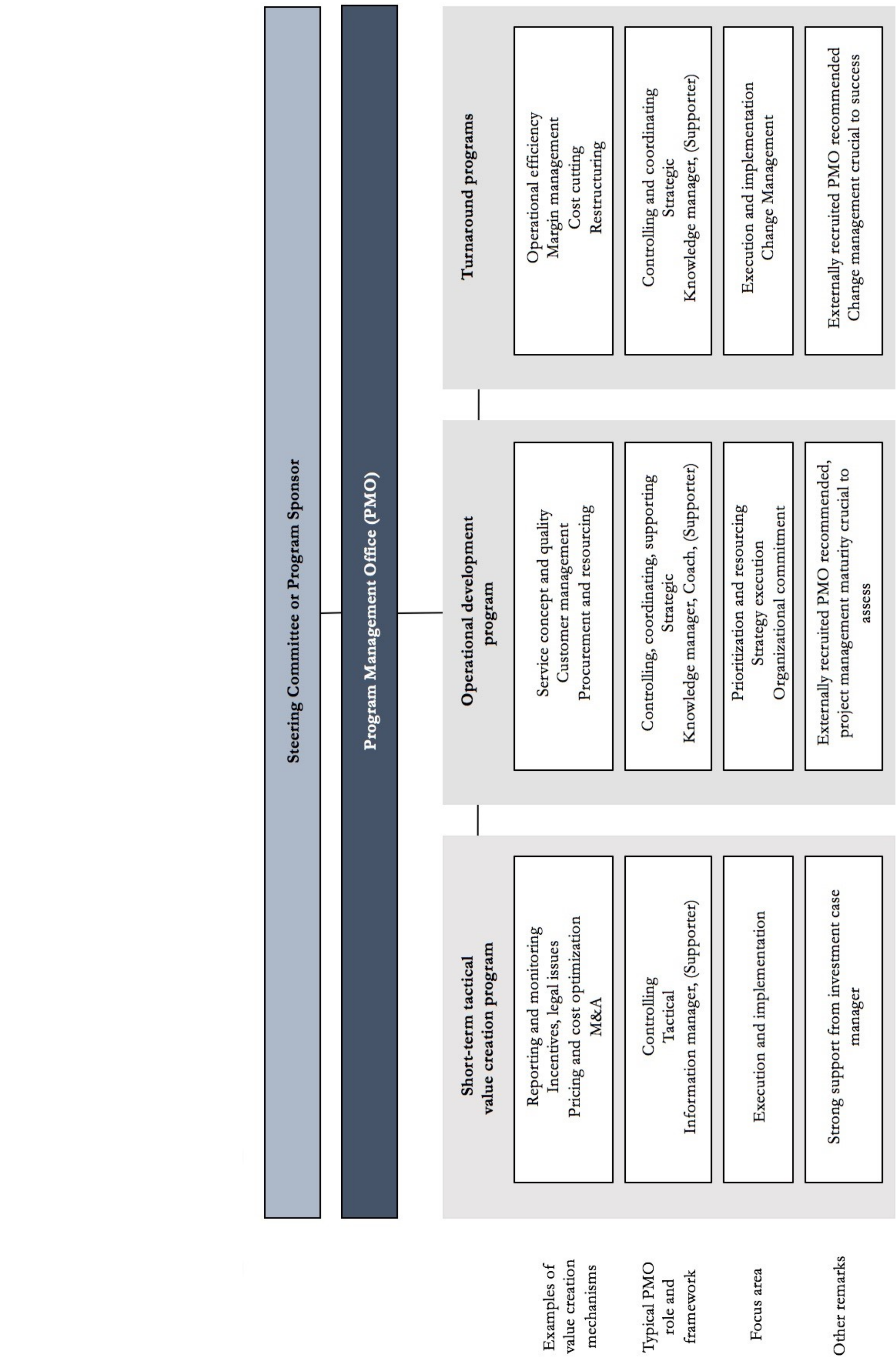
5.1 Discussion of the results

The objective of this thesis was to examine how and under which circumstances Nordic private equity investors have used project and program management offices in their portfolio companies to create additional value. The theoretical part of the study was divided into two research questions: private equity investors' value creation mechanisms and PMOs' contribution to value creation. The empirical part of this thesis followed this categorization. First, in Chapter 4.1, I examined the circumstances under which private equity investors have initiated a PMO to facilitate value creation activities in their portfolio companies. In addition, the structure of the programs and their objectives in each case were examined. Second, Chapter 4.2. discussed how the PMO contributed to growth promoting activities in the studied organizations. During this chapter I will discuss the implications of the results compared to previous theories in more detail.

In order to discuss results in a structured manner, earlier presented existing academic research and empirical results of this study are further organized into a comprehensive framework presented in ***Figure 11***. The framework will be discussed in more detail in the next paragraphs. First, the framework consists of propositions which are related to *circumstances under which the PE investors have initiated a PMO to create value in their portfolio companies.* Second, it focuses on PMO characteristics, mechanisms and methods that PMOs use to facilitate growth in the portfolio companies. This group aims to answer the research question *how PE investors can use PMOs to create additional value.*

Results of this study imply that private equity investors use PMO to create value in three distinct situations. Empirical data suggest that PE investors should initiate a PMO when pursuing certain value creation mechanisms. Based on categorization of value creation mechanisms in ***Figure 4*** and the objectives of the value creation programs, I argue that a PMO is a suitable method to i) drive operational improvements and ii) ensure improved strategy execution. However, a number of significantly different projects can be grouped under the latter category as demonstrated in ***Figure 11***. In addition, a PMO contributes indirectly to value creation through promoting more structured reporting and monitoring (Berg and Gottschalg, 2004), and lower agency costs (Jensen, 1989) as it is responsible for implementing a program consisting of projects mutually agreed by the executive management team and board of directors. In terms of more structured management practices, a PMO can strengthen and support the existing governance structure by implementing project management practices and processes (Thamhain, 2004). In

Figure 11: Proposed framework of PMO configurations in leveraged buyout investments



addition, management system is updated and governance model reshaped in majority of case programs.

In terms of PMO governance, results suggest that a short, well-structured program is managed by an internal PMO and supported by the investment case manager. These programs are often strongly related to either acquisition or to exit: they prepare portfolio companies for value creation during holding period or aim to maximize value capture at exit. An organizational task force PMO may be initiated also under similar circumstances, such as a merger or a divestment of a business unit. The investment case manager is recommended to support the PMO during the program as an advisor and take part in the program steering group. Empirical data clearly indicates that a distinct value creation program should not be managed concurrently with other, more operational tasks. PMO's objectivity respective to both management team and board's requirements is crucial in terms of prioritization in order to implement strategically meaningful projects and contribute to improved strategy execution (Saunders, Mann and Smith, 2008; Boppel, 2013). In terms of operational development programs and turnaround programs, data is unambiguous: an internal PMO outside the line organizations is strongly recommended (Aubry and Hobbs, 2011) though case program D2 was successfully managed by an internal PMO in parallel with operational responsibilities. Regarding the project or program management officer, empirical data implies that PE investors should pay close attention to the project management maturity of the portfolio company when instituting a PMO. Research data and previous academic research is unequivocal in terms program manager's organizational home: The PMO should report directly to CEO, have a seat at the executive table and function outside of traditional line organization. A strategic PMO has leadership support also from a program sponsor or steering board (Crawford, 2011). Furthermore, academic research strongly advice that PE investors do not and should not run their portfolio companies but equip them with adequate and sufficient resources (Järvenpää, 2014) – such as the PMO.

In addition to the empirical framework presented above, this study aims at providing PE investors and portfolio company executives deeper understanding of the use of PMOs as a value creation mechanism in their portfolio companies. Thus, PE investors should seek to identify managerial competences and organizational requirements in building a PMO that best answers to organization's needs and is the most likely to manage the value creation program successfully. Regardless of the PMO framework and value creation mechanisms, the program management officer has a significant impact on the program success. Majority of the interviewees focused on discussing the importance of the program manager for growth promoting activities and creating organizational buy-in, and outlined a number of PMO characteristics. According the three interviewees, PMO should be *"a doer person and should get things done"* (Deputy CEO, case company E). As PMO frameworks presented in the Chapter 2.2 and summarized in ***Table 4*** underline, managing a PMO is first and foremost *"people business"*. To conclude with, PMOs have many different roles and hence not only subject-matter expertise and project management competences should be considered when recruiting a PMO. However, their importance is highlighted when project management maturity is low.

Based on the theoretical framework and empirical data, a suitable configuration of value creation mechanisms (see e.g. Järvenpää, 2014; Jensen, 1989), PMO frameworks (Project Management Institute 2013b; Desouza and Evaristo, 2006) and portfolio company life stage (EVCA, 2007) emerges. A goal splitting PMO that operates on operational and tactical level embraces the roles of information manager and supporter (Desouza and Evaristo, 2006; Boppel *et al.*, 2013). A goal splitting PMO typically executes *administrative* projects encompassing for example monitoring and reporting processes, and compensation and incentive system and is typical to short-term, tactical programs. As discussed in Chapter 4.1.1, *administrative* value creation methods are present especially in the 100-day plan (case A1).

In turn, operational development and turnaround PMOs adopt the role of task force or overlay PMO (Boppel *et al.*, 2013). A task force PMO embraces coordinating and controlling roles (Unger, Gemünden and Aubry, 2012). These roles encompass traditional PMO responsibilities of building project management system, ensuring adequate resourcing and rigorous project reporting and monitoring processes. The importance of prioritization and strategy support is also accentuated. These PMOs add to the goal splitting PMO by operating on a strategic level and adopting also the roles of a program coach and knowledge manager thus realizing also the supporting roles of the PMO (Desouza and Evaristo, 2006; Unger, Gemünden and Aubry, 2012). Especially in terms of organizational turnaround programs and restructuring activities, PMO's supporting and coaching roles are emphasized. PMO should gain a recognition of business leadership and ownership, and all projects whether operational, tactical or strategic, should proceed through PMO. Also, empirical data supports existing academic research by clearly indicating that the more challenging and comprehensive the program is, the more PMO's role as organizational face of change is emphasized (Letavec, 2006; Crawford, 2011). The program manager embodies the program objectives and thus, promotes change management.

In addition to being the face of the program and contributing to change management, PMO's most important role is to act a strategy implementer. The PMO ensures the execution of strategically most important projects: PMOs role is essential in delivering products and services to satisfy existing customers while always innovating to expand their existing markets. PMOs must seize new opportunities while controlling unplanned risk (Forrester Consulting, 2013). As PMO literature summarizes, strategy is executed through strategic initiatives (see e.g. Berg and Gottschalg, 2004; Keenan *et al.*, 2013). As discussed earlier, all projects should flow through PMO because projects may not directly subordinate to strategy, but can still influence it (Cooke-Davies, Crawford and Lechler, 2009). Prioritization is increasingly emphasized in leveraged buyout context due to high leverage. COO of case company A summarize "*transparency and resourcing are key aspects of active, well-functioning project portfolio review process*". Thus, the PMO should focus on critical initiatives (Keenan *et al.*, 2013) and act as a link between executive vision and strategy execution.

5.2 Reliability and validity of the thesis

In terms of assessing validity and reliability of qualitative research, existing academic theory is not explicit. Golafshani (2003) argues that in quantitative research the criteria for reliability is the replicability and repeatability of results, and validity is assessed by accuracy and applicability of results. These criteria are not fully applicable to qualitative research which aims at generating new theory in contrast to quantitative research which attempts to test predefined hypotheses (Dubois and Gadde, 2002). However, a qualifying validity check for the research is still needed. In order to take into account different aspects of validity and reliability, criteria presented by Whittemore, Chase and Mandle (2001) is used and discussed in the following paragraph.

The findings of the research are based on direct answers of the respondents and on the written material provided by the case companies. *Credibility and authenticity* of the research were further guaranteed by anonymity. *Criticality and integrity* of the research were ensured by continuous evaluations throughout the research process. Furthermore, all methods and claims were supported by existing academic literature or explicit findings. However, PMO literature concentrates on large publicly listed companies, and all frameworks, best practices and tools are not necessarily applicable in small and medium-sized companies or private equity portfolio companies due to e.g. limitations in resources and differences in business environment and business objectives. There are also geographical differences in project management maturity and practices as well as in PMO approach (Forrester Consulting, 2013). In terms of explicitness of the study, I am not fully unbiased since I worked for one of the case companies during the study. Even so, the company was fully in scope of the study and further biases mitigated by interviewing also the company CEO and providing extensive written material. On the other hand, since I had first-hand experience of managing a value creation program in a PE portfolio company, the interviewees were very helpful and willing to disclose challenges and e.g. negative effects of private equity ownership. As a conclusion, the validity and reliability of the study were ensured and possible biases mitigated through multiple measures.

5.3 Directions for further research

This thesis provides an overview of different circumstantial PMO framework configurations PE investors have used to create value. In turn, the proposed framework also indicates that a PMO is not necessarily a suitable value creation method for altering the strategic growth orientation of the portfolio company nor for promoting entrepreneurship. PMO mission and objectives discussed in Chapter 2.2. partly support this proposition. However, as PMO is commonly used as a vehicle to implement strategy and can be used as transformational device, further research on portfolio companies that have altered their strategic growth orientation and that have used a PMO to do so is recommended. In addition, the sample didn't include any portfolio companies that promoted entrepreneurship but instead focused on institutionalizing activities. Thus, PMO's applicability in promoting entrepreneurship should be tested.

As mentioned in the Chapter 5.2 PMO approaches vary significantly between continents and countries. Nordic private investment industry is still relatively young compared to US PE sector for example. A comparison between the European and US PE industries and their use of PMOs as a value creation device in promoting growth would provide deeper understanding on applicable PMO frameworks in PE industry. An interesting question would be for example how US private equity investors have used PMO as a transformational device in their portfolio companies to alter their strategic growth orientation.

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Appendix A: Case company summary

Case ID	Turnover	Number of employees	Type of investment	Reason for initiating the PMO	Short case company discription
A	70M€	1300	Buy-and-build	Acquisition (100-day plan)	The company operates in medical industry where it had to ensure scarce resources while ensuring homogenous quality of treatments. Inorganic growth targets were also ambitious.
B	70M€	600	Buy-and-build, Operational development	Industry disruption and strategy execution	The company operates in hospitality industry that was facing a disruption both in terms of customer behavior and customer segmentation as well as in terms of sales channels due to digitalization.
C	300M€	900	Operational development	Poor financial performance	The company was in a "really bad shape" according to the CEO. It had too heavy cost structure and operating in an industry of thin margins. Increasing raw material prices and decreasing prices forced the company to initiate an turnaround program.
D	110Me	500	Operational development	Vendor due diligence analysis & poor financial performance	The private equity investor was ready to exit the case company and thus executed a vendor due diligence analysis. The analysis proposed the PE investor to make certain operative improvements in order to complete a successful exit. These improvements were group under a program. Yet, the program failed in meeting its targets.
E	35M€	100	Buy-and-build	N/A	The company consists of a network of mechanical workshops with a very small headquarters managing e.g. the integration process of new workshops. The company stated it doestn't have a PMO as such but was running two ongoing development initiatives.
F	100M€	660	Strategic distinctiveness	N/A	The case company is in fact a network of companies operating in media, design and technology industries and is composed by the top agencies in their respective fields. The holding company had only minor ongoing development areas while focusing on empowering the individual agencies.

APPENDIX B: THEME INTERVIEW STRUCTURE

I. Employee and company background

- Could you tell me a about yourself?
- Could you tell me a about your current position in the company?
- What is the background of the company as a buyout investment
- In your opinion, where is the company now in the private investment lifecycle?

II. PMO background

- Are you running a program of a portfolio of projects?
- How was that program or portfolio initiated?
- How did you choose which projects to include in the program/portfolio?
- How did you initiate the PMO?

III. PMO dimensions

- What is the organizational home of the PMO? Who does the PMO report to?
- How do you measure the performance of the PMO?
- How do you measure the performance of projects?
- How do you measure the progress and success of the program?
- How do you prioritize projects?
- Who do is managing the projects and who do they report to?
- What kind of roles and responsibilities does the PMO have?
- How long have you been running the program? When are you planning to terminate the program and why?